APPENDIX

CONTENTS

1. RC Technical Information 1
2. RC Trouble Shooting Guide 8
3. Service Call Explanations & Checks 38
4. RC Master Disposal System Trouble Shooting 47

RC5600D/5600/4500

TROUBLE SHOOTING GUIDE

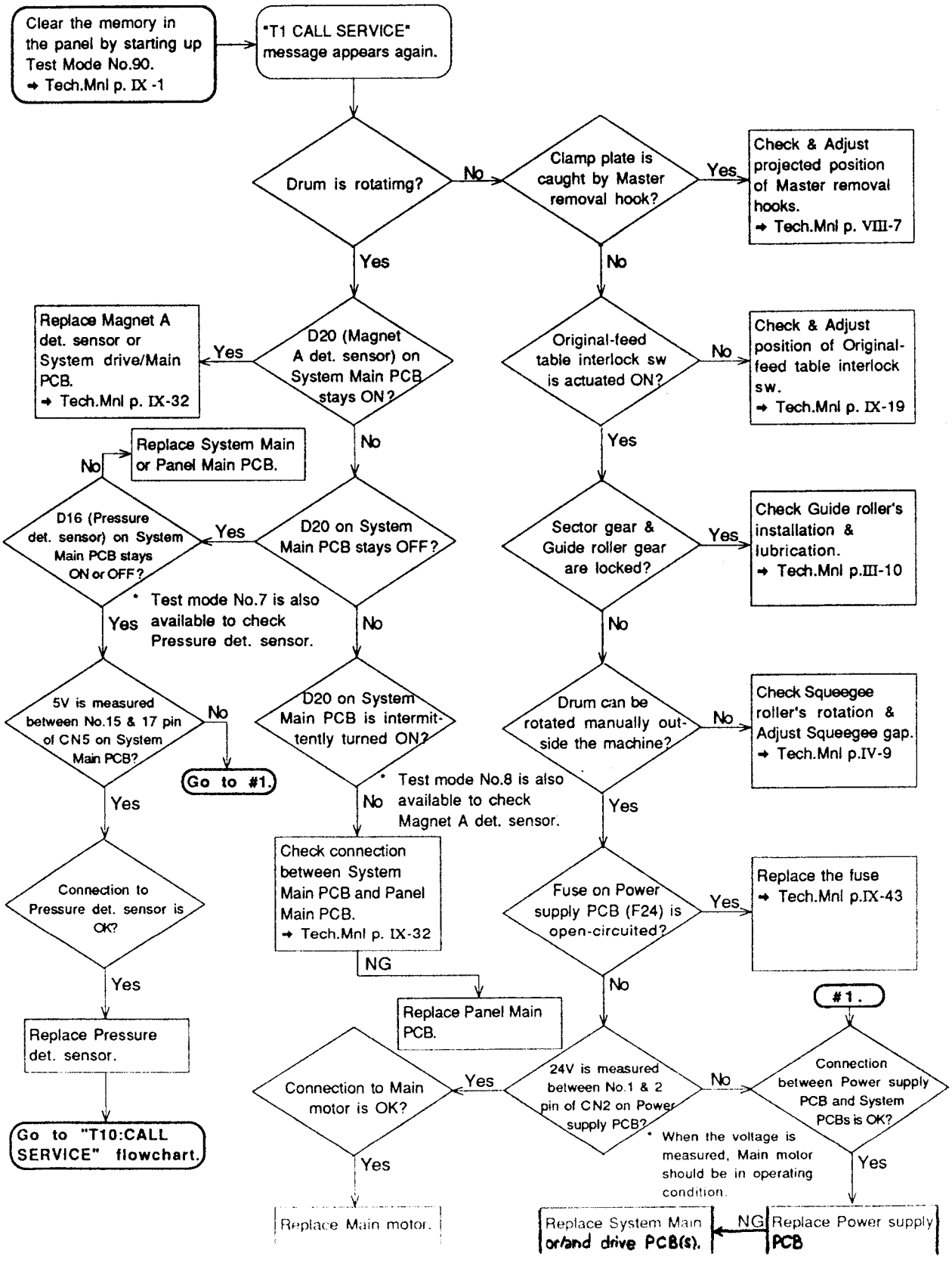
(VERSION 1.0, JUNE 1990)

RISO

1. "T# CALL SERVICE" Messages

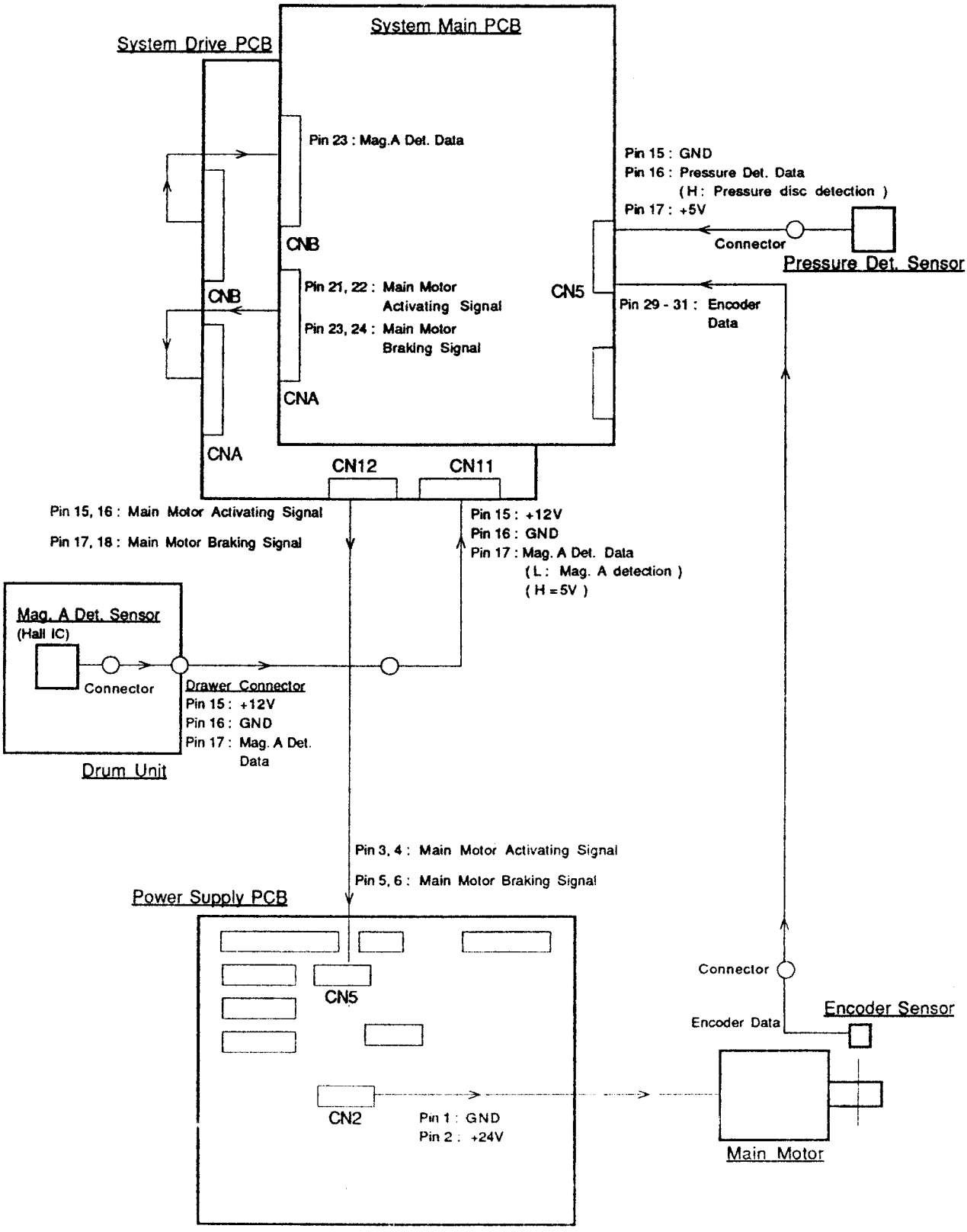
"T1 CALL SERVICE" - Main Motor Lock

Checking Flowchart


Clear the memory in the panel by starting up Test Mode No.90.
→ Tech.Mnl p. IX -1
"T1 CALL SERVICE" message appears again.
Drum is rotatimg?
No
Clamp plate is caught by Master removal hook?
Yes
Check & Adjust projected position of Master removal hooks.
→ Tech.Mnl p. VIII-7
Yes
No
Replace Magnet A det. sensor or System drive/Main PCB.
→ Tech.Mnl p. IX-32
Yes
D20 (Magnet A det. sensor) on System Main PCB stays ON?
Original-feed table interlock sw is actuated ON?
No
Check & Adjust position of Original-feed table interlock sw.
→ Tech.Mnl p. IX-19
No
Yes
Replace System Main or Panel Main PCB.
No
D16 (Pressure det. sensor) on System Main PCB stays ON or OFF?
Yes
D20 on System Main PCB stays OFF?
Sector gear & Guide roller gear are locked?
Yes
Check Guide roller's installation & lubrication.
→ Tech.Mnl p.III-10
* Test mode No.7 is also available to check Pressure det. sensor.
Yes
No
No
5V is measured between No.15 & 17 pin of CN5 on System Main PCB?
No
D20 on System Main PCB is intermittently turned ON?
Drum can be rotated manually outside the machine?
No
Check Squeegee roller's rotation & Adjust Squeegee gap.
→ Tech.Mnl p.IV-9
Go to #1.
* Test mode No.8 is also available to check Magnet A det. sensor.
Yes
No
Yes
Yes
Connection to Pressure det. sensor is OK?
Check connection between System Main PCB and Panel Main PCB.
→ Tech.Mnl p. IX-32
Fuse on Power supply PCB (F24) is open-circuited?
Yes
Replace the fuse
→ Tech.Mnl p.IX-43
NG
No
Yes
#1.
Replace Pressure det. sensor.
Replace Panel Main PCB.
Connection to Main motor is OK?
Yes
24V is measured between No.1 & 2 pin of CN2 on Power supply PCB?
No
Connection between Power supply PCB and System PCBs is OK?
* When the voltage is measured, Main motor should be in operating condition.
Go to "T10:CALL SERVICE" flowchart.
Yes
Yes
Replace Main motor.
Replace System Main or/and drive PCB(s).
NG
Replace Power supply PCB

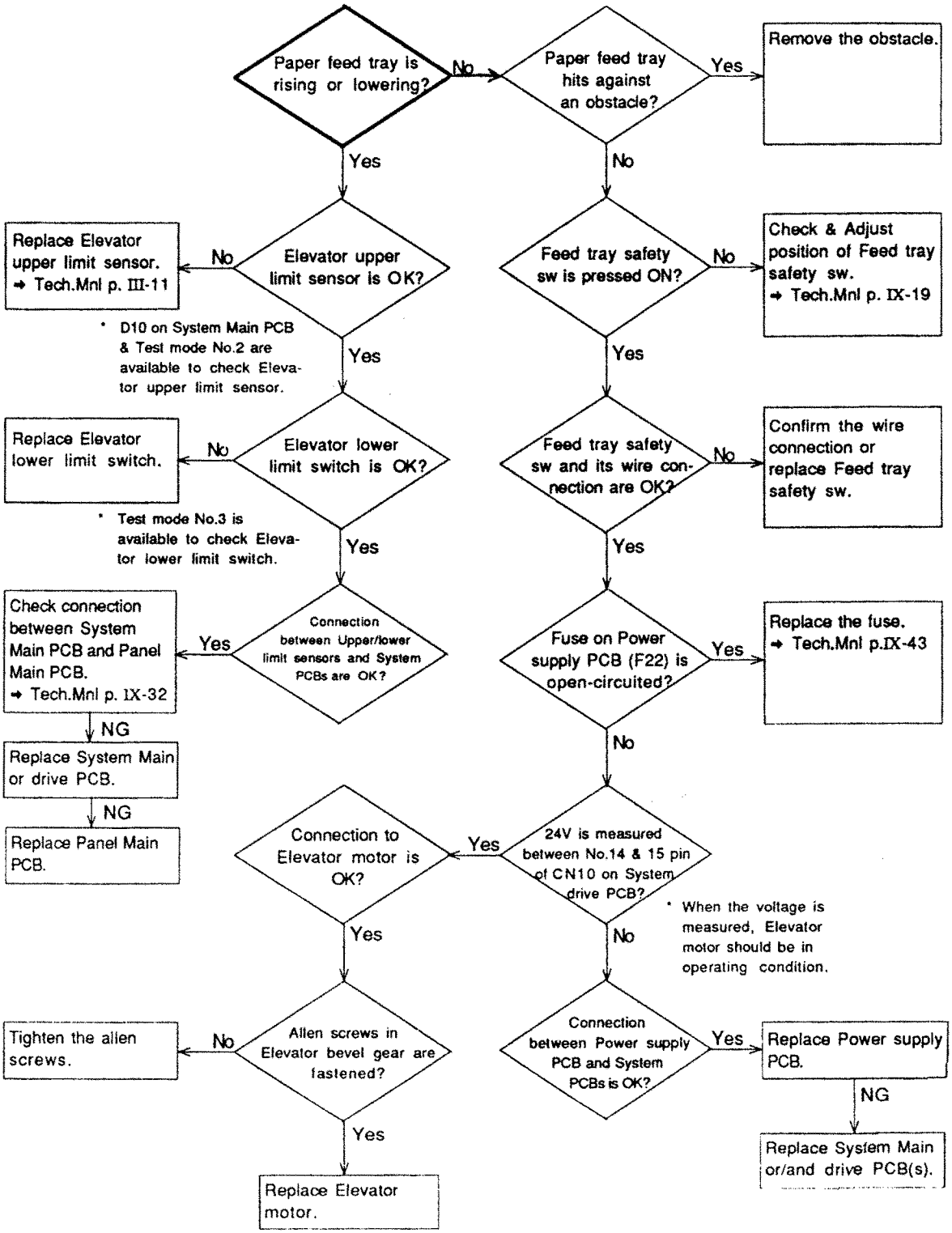
"T1 CALL SERVICE" - **Main Motor Lock**

Wire Connection Diagram



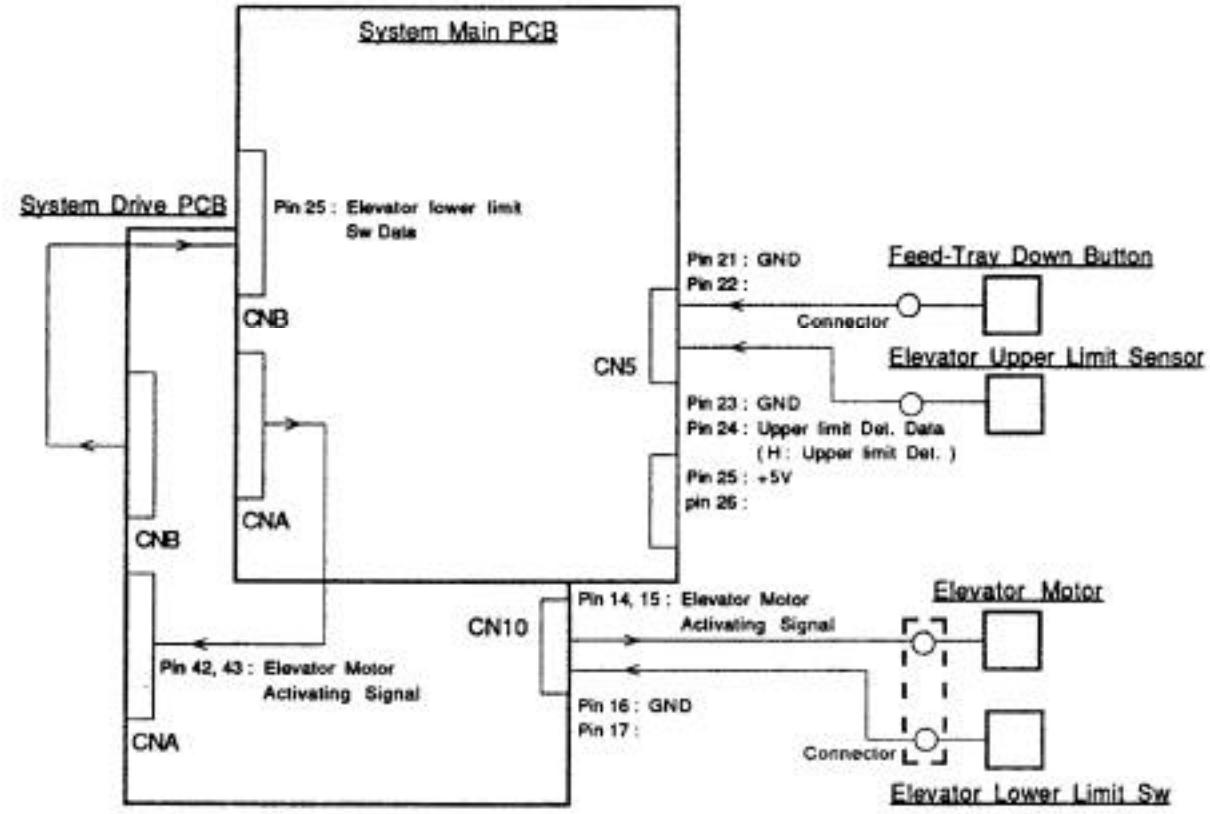
"T2 CALL SERVICE" - **Elevator Motor Lock**

Checking Flowchart


Paper feed tray is rising or lowering?
No
Paper feed tray hits against an obstacle?
Yes
Remove the obstacle.
Yes
No
Replace Elevator upper limit sensor. → Tech.Mnl p. III-11
No
Elevator upper limit sensor is OK?
Feed tray safety sw is pressed ON?
No
Check & Adjust position of Feed tray safety sw. → Tech.Mnl p. IX-19
* D10 on System Main PCB & Test mode No.2 are available to check Elevator upper limit sensor.
Yes
Yes
Replace Elevator lower limit switch.
No
Elevator lower limit switch is OK?
Feed tray safety sw and its wire connection are OK?
No
Confirm the wire connection or replace Feed tray safety sw.
* Test mode No.3 is available to check Elevator lower limit switch.
Yes
Yes
Check connection between System Main PCB and Panel Main PCB. → Tech.Mnl p. IX-32
Yes
Connection between Upper/lower limit sensors and System PCBs are OK?
Fuse on Power supply PCB (F22) is open-circuited?
Yes
Replace the fuse. → Tech.Mnl p.IX-43
NG
Replace System Main or drive PCB.
NG
Replace Panel Main PCB.
No
Connection to Elevator motor is OK?
Yes
24V is measured between No.14 & 15 pin of CN10 on System drive PCB?
* When the voltage is measured, Elevator motor should be in operating condition.
Yes
No
Tighten the allen screws.
No
Allen screws in Elevator bevel gear are fastened?
Connection between Power supply PCB and System PCBs is OK?
Yes
Replace Power supply PCB.
NG
Replace System Main or/and drive PCB(s).
Yes
Replace Elevator motor.

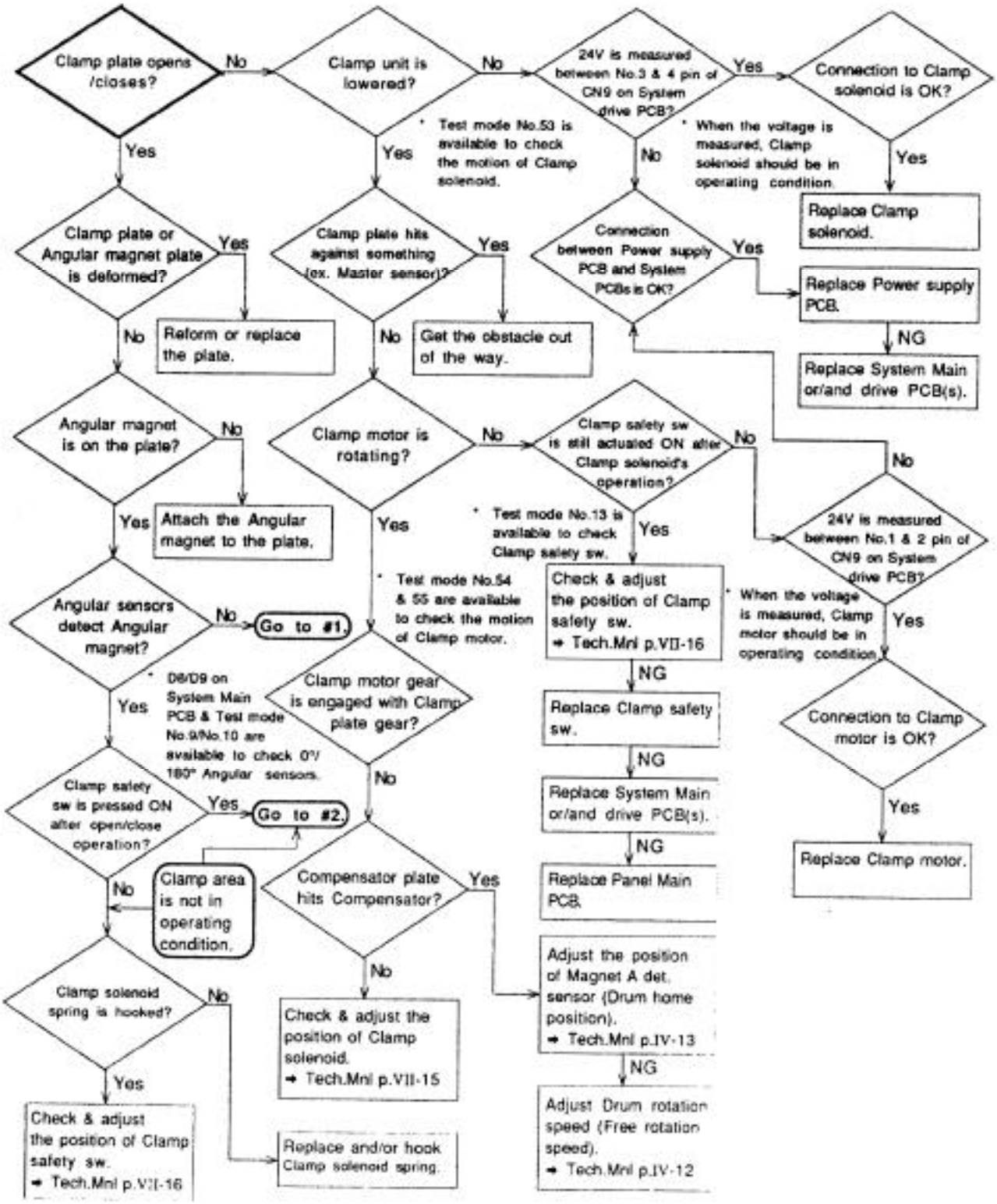
"T2 CALL SERVICE" - **Elevator Motor Lock**

Wire Connection Diagram



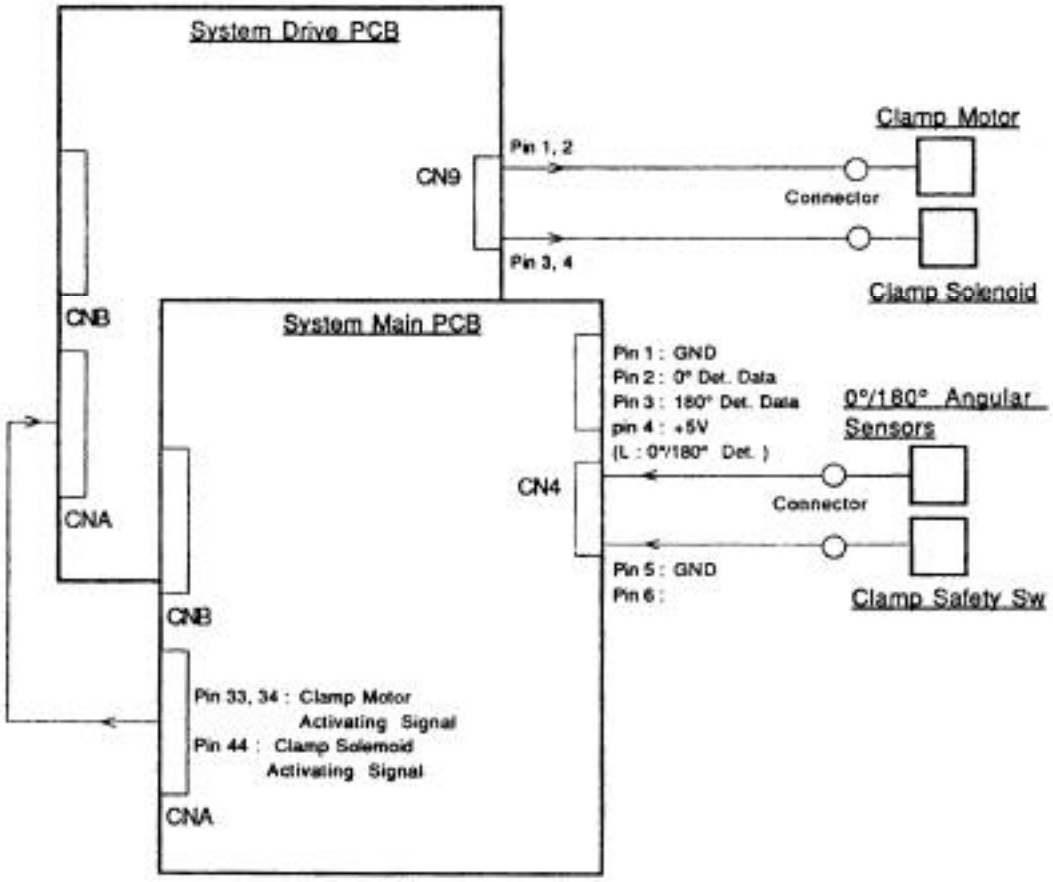
"T3 CALL SERVICE" - Clamp Error

Checking Flowchart

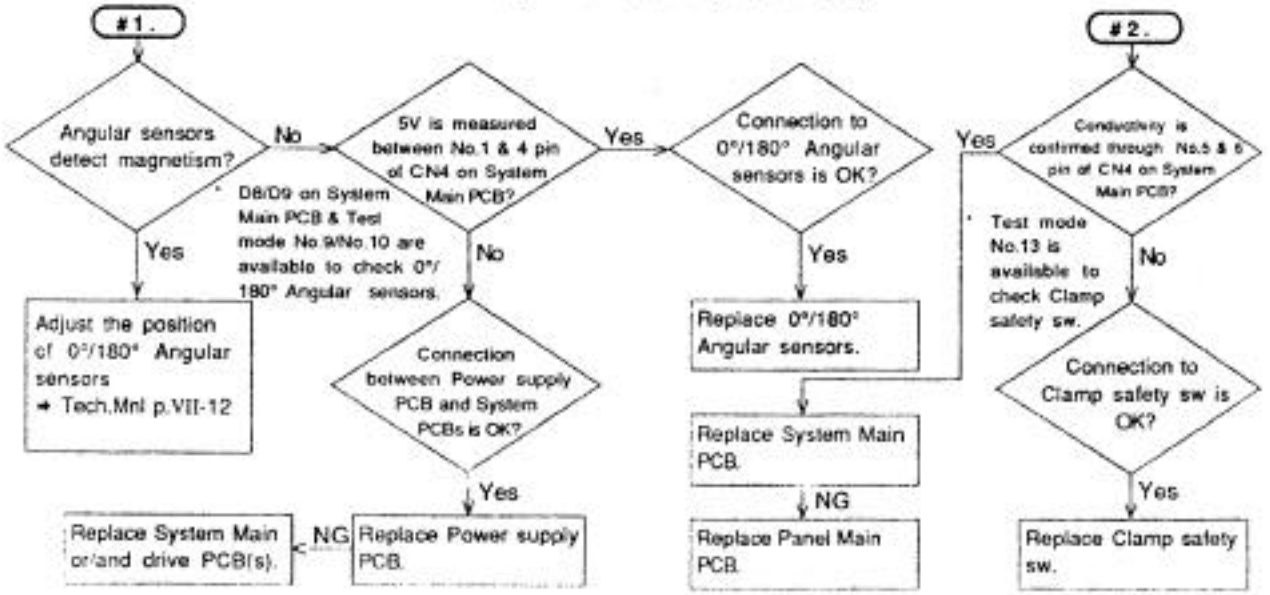

Clamp plate opens /closes?
No
Clamp unit is lowered?
No
24V is measured between No.3 & 4 pin of CN9 on System drive PCB?
Yes
Connection to Clamp solenoid is OK?
Yes
Replace Clamp solenoid.
* Test mode No.53 is available to check the motion of Clamp solenoid.
* When the voltage is measured, Clamp solenoid should be in operating condition.
Yes
Clamp plate or Angular magnet plate is deformed?
Yes
Reform or replace the plate.
Clamp plate hits against something (ex. Master sensor)?
Yes
Get the obstacle out of the way.
No
Connection between Power supply PCB and System PCBs is OK?
Yes
Replace Power supply PCB.
NG
Replace System Main or/and drive PCB(s).
No
Angular magnet is on the plate?
No
Attach the Angular magnet to the plate.
Yes
Clamp motor is rotating?
No
Clamp safety sw is still actuated ON after Clamp solenoid's operation?
No
Yes
* Test mode No.13 is available to check Clamp safety sw.
Check & adjust the position of Clamp safety sw.
→ Tech.Mnl p.VII-16
NG
Replace Clamp safety sw.
NG
Replace System Main or/and drive PCB(s).
NG
Replace Panel Main PCB.
24V is measured between No.1 & 2 pin of CN9 on System drive PCB?
Yes
* When the voltage is measured, Clamp motor should be in operating condition.
Connection to Clamp motor is OK?
Yes
Replace Clamp motor.
Angular sensors detect Angular magnet?
No
Go to #1.
Yes
* D8/D9 on System Main PCB & Test mode No.9/No.10 are available to check 0°/180° Angular sensors.
* Test mode No.54 & 55 are available to check the motion of Clamp motor.
Clamp motor gear is engaged with Clamp plate gear?
No
Clamp safety sw is pressed ON after open/close operation?
Yes
Go to #2.
No
Clamp area is not in operating condition.
Compensator plate hits Compensator?
Yes
Adjust the position of Magnet A det. sensor (Drum home position).
→ Tech.Mnl p.IV-13
NG
Adjust Drum rotation speed (Free rotation speed).
→ Tech.Mnl p.IV-12
No
Check & adjust the position of Clamp solenoid.
→ Tech.Mnl p.VII-15
Clamp solenoid spring is hooked?
No
Replace and/or hook Clamp solenoid spring.
Yes
Check & adjust the position of Clamp safety sw.
→ Tech.Mnl p.VII-16

"T3 CALL SERVICE" - **Clamp Error**

Wire Connection Diagram

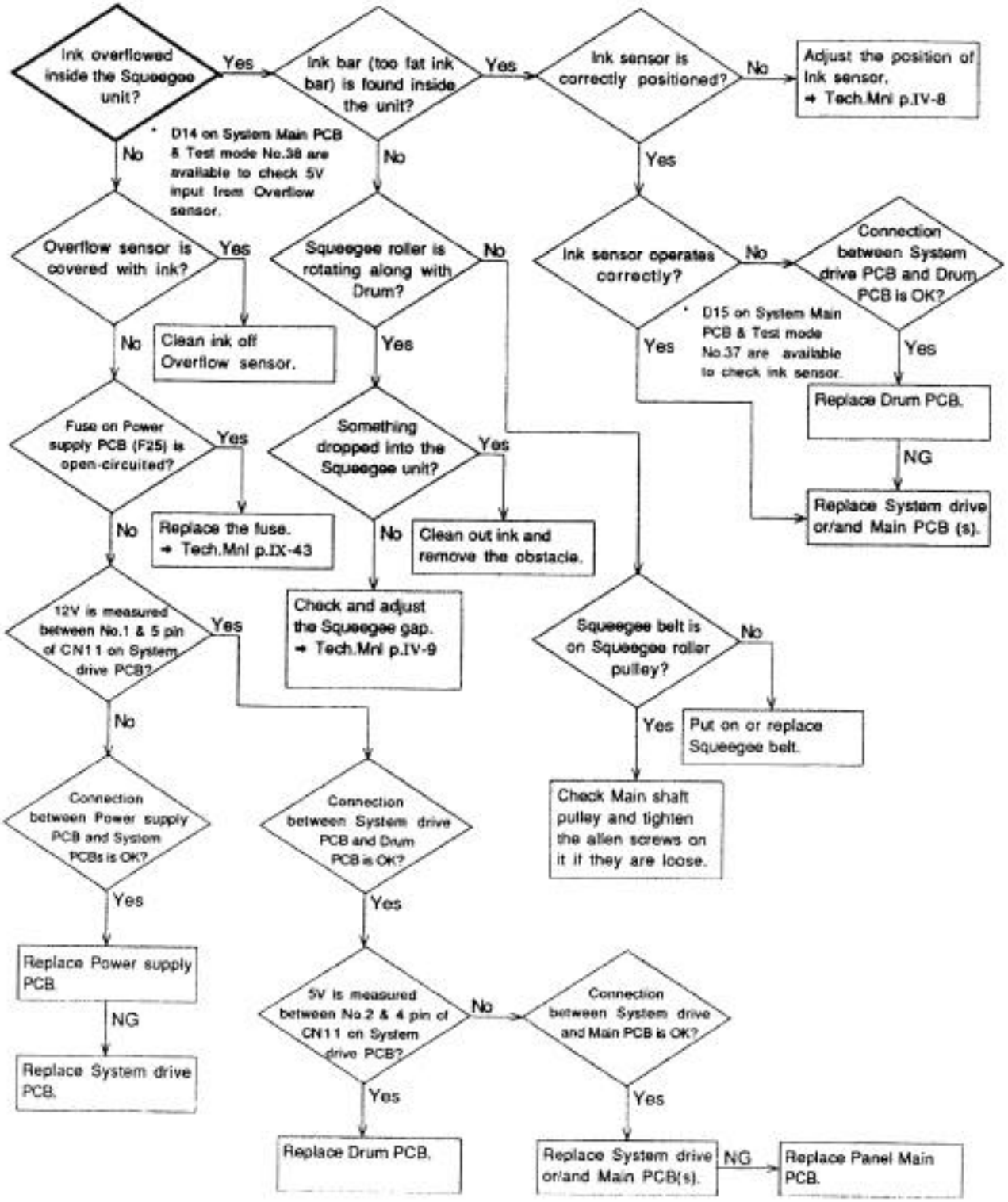


Checking Flowchart (Continued)


#1.
Angular sensors detect magnetism?
No
5V is measured between No.1 & 4 pin of CN4 on System Main PCB?
Yes
Connection to 0°/180° Angular sensors is OK?
Yes
Yes
Adjust the position of 0°/180° Angular sensors
→ Tech.Mnl p.VII-12
D8/D9 on System Main PCB & Test mode No.9/No.10 are available to check 0°/180° Angular sensors.
No
Connection between Power supply PCB and System PCBs is OK?
Yes
Replace 0°/180° Angular sensors.
Replace System Main PCB.
NG
Replace Panel Main PCB.
Replace System Main or/and drive PCB(s).
NG
Replace Power supply PCB.
#2.
Conductivity is confirmed through No.5 & 6 pin of CN4 on System Main PCB?
Yes
No
Test mode No.13 is available to check Clamp safety sw.
Connection to Clamp safety sw is OK?
Yes
Replace Clamp safety sw.

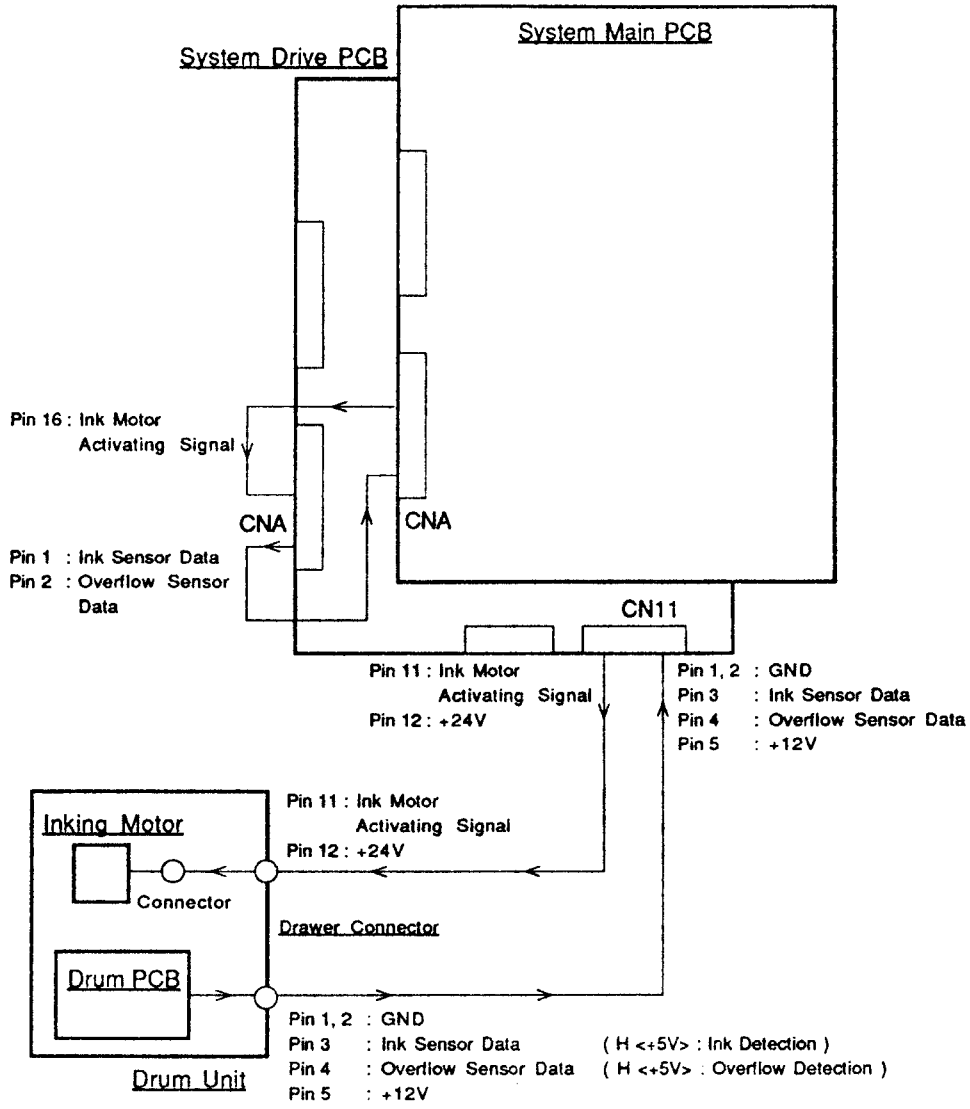
"T4 CALL SERVICE" - Ink Overflow

Checking Flowchart


Ink overflowed inside the Squeegee unit?
Yes
Ink bar (too fat ink bar) is found inside the unit?
Yes
Ink sensor is correctly positioned?
No
Adjust the position of Ink sensor. → Tech.Mnl p.IV-8
Yes
No
No
* D14 on System Main PCB & Test mode No.38 are available to check 5V input from Overflow sensor.
Overflow sensor is covered with ink?
Yes
Clean ink off Overflow sensor.
No
Squeegee roller is rotating along with Drum?
No
Yes
Ink sensor operates correctly?
No
Connection between System drive PCB and Drum PCB is OK?
Yes
Yes
* D15 on System Main PCB & Test mode No.37 are available to check ink sensor.
Replace Drum PCB.
NG
Replace System drive or/and Main PCB (s).
Fuse on Power supply PCB (F25) is open-circuited?
Yes
Replace the fuse. → Tech.Mnl p.IX-43
No
Something dropped into the Squeegee unit?
Yes
Clean out ink and remove the obstacle.
No
Check and adjust the Squeegee gap. → Tech.Mnl p.IV-9
12V is measured between No.1 & 5 pin of CN11 on System drive PCB?
Yes
No
Squeegee belt is on Squeegee roller pulley?
No
Put on or replace Squeegee belt.
Yes
Check Main shaft pulley and tighten the allen screws on it if they are loose.
Connection between Power supply PCB and System PCBs is OK?
Yes
Replace Power supply PCB.
NG
Replace System drive PCB.
Connection between System drive PCB and Drum PCB is OK?
Yes
5V is measured between No.2 & 4 pin of CN11 on System drive PCB?
No
Connection between System drive and Main PCB is OK?
Yes
Yes
Replace Drum PCB.
Replace System drive or/and Main PCB(s).
NG
Replace Panel Main PCB.

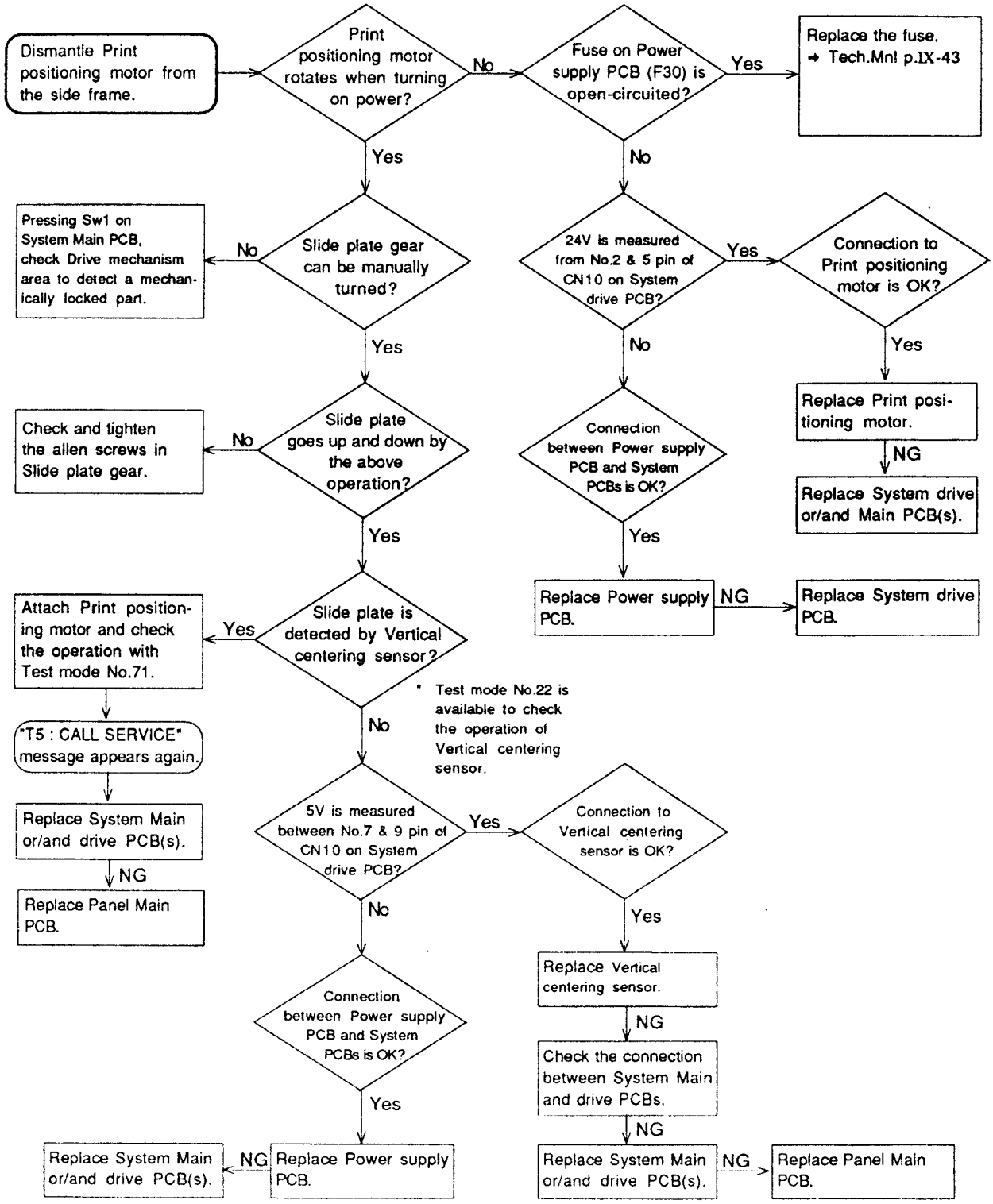
"T4 CALL SERVICE" - Ink Overflow

Wire Connection Diagram


System Drive PCB
System Main PCB
Pin 16 : Ink Motor Activating Signal
CNA
CNA
Pin 1 : Ink Sensor Data
Pin 2 : Overflow Sensor Data
CN11
Pin 11 : Ink Motor Activating Signal
Pin 12 : +24V
Pin 1, 2 : GND
Pin 3 : Ink Sensor Data
Pin 4 : Overflow Sensor Data
Pin 5 : +12V
Inking Motor
Pin 11 : Ink Motor Activating Signal
Pin 12 : +24V
Connector
Drawer Connector
Drum PCB
Pin 1, 2 : GND
Pin 3 : Ink Sensor Data (H <+5V> : Ink Detection)
Pin 4 : Overflow Sensor Data (H <+5V> : Overflow Detection)
Pin 5 : +12V
Drum Unit

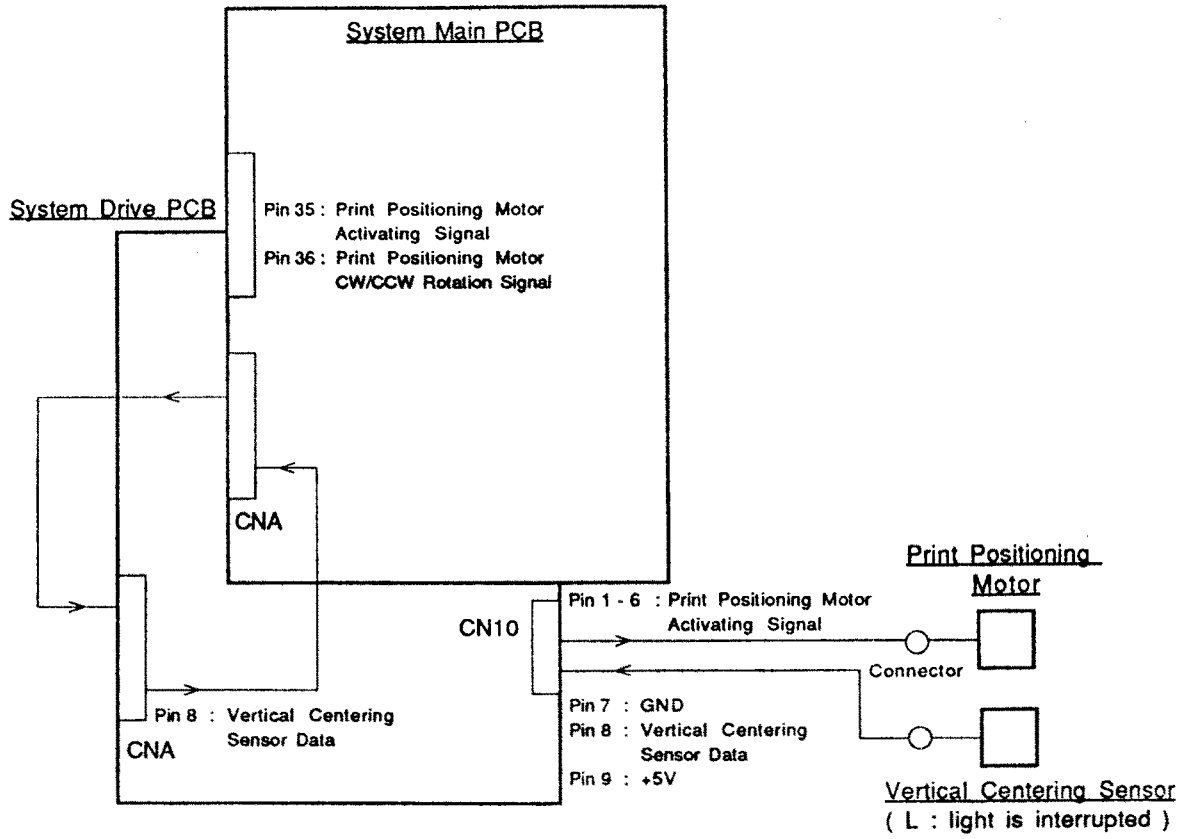
"T5 CALL SERVICE" - Print Positioning Motor Lock

Checking Flowchart


Dismantle Print positioning motor from the side frame.
Print positioning motor rotates when turning on power?
No
Fuse on Power supply PCB (F30) is open-circuited?
Yes
Replace the fuse. ➡ Tech.Mnl p.IX-43
Yes
No
Pressing Sw1 on System Main PCB, check Drive mechanism area to detect a mechanically locked part.
No
Slide plate gear can be manually turned?
24V is measured from No.2 & 5 pin of CN10 on System drive PCB?
Yes
Connection to Print positioning motor is OK?
Yes
Yes
No
Check and tighten the allen screws in Slide plate gear.
No
Slide plate goes up and down by the above operation?
Connection between Power supply PCB and System PCBs is OK?
Replace Print positioning motor.
NG
Replace System drive or/and Main PCB(s).
Yes
Yes
Replace Power supply PCB.
NG
Replace System drive PCB.
Attach Print positioning motor and check the operation with Test mode No.71.
Yes
Slide plate is detected by Vertical centering sensor?
* Test mode No.22 is available to check the operation of Vertical centering sensor.
"T5 : CALL SERVICE" message appears again.
No
Replace System Main or/and drive PCB(s).
NG
Replace Panel Main PCB.
5V is measured between No.7 & 9 pin of CN10 on System drive PCB?
Yes
Connection to Vertical centering sensor is OK?
No
Yes
Replace Vertical centering sensor.
NG
Connection between Power supply PCB and System PCBs is OK?
Check the connection between System Main and drive PCBs.
NG
Yes
Replace System Main or/and drive PCB(s).
NG
Replace Power supply PCB.
Replace System Main or/and drive PCB(s).
NG
Replace Panel Main PCB.

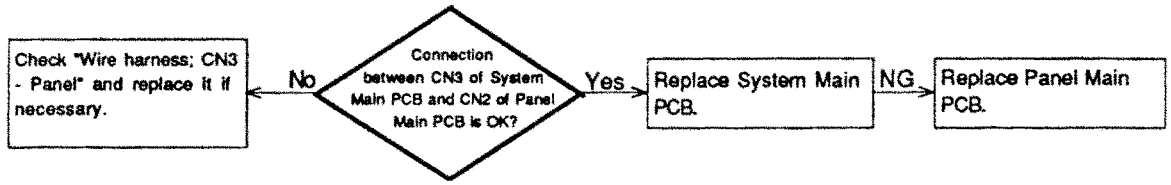
"T5 CALL SERVICE" - Print Positioning Motor Lock

Wire Connection Diagram


System Main PCB
System Drive PCB
Pin 35 : Print Positioning Motor Activating Signal
Pin 36 : Print Positioning Motor CW/CCW Rotation Signal
CNA
CN10
Pin 1 - 6 : Print Positioning Motor Activating Signal
Print Positioning Motor
Connector
Pin 8 : Vertical Centering Sensor Data
CNA
Pin 7 : GND
Pin 8 : Vertical Centering Sensor Data
Pin 9 : +5V
Vertical Centering Sensor
(L : light is interrupted)

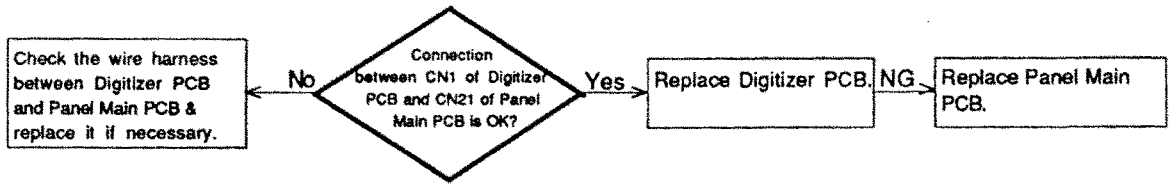
"T6 CALL SERVICE" - **Communication Error** (Panel PCB - System PCB)

Checking Flowchart


Check "Wire harness; CN3 - Panel" and replace it if necessary.
No
Connection between CN3 of System Main PCB and CN2 of Panel Main PCB is OK?
Yes
Replace System Main PCB.
NG
Replace Panel Main PCB.

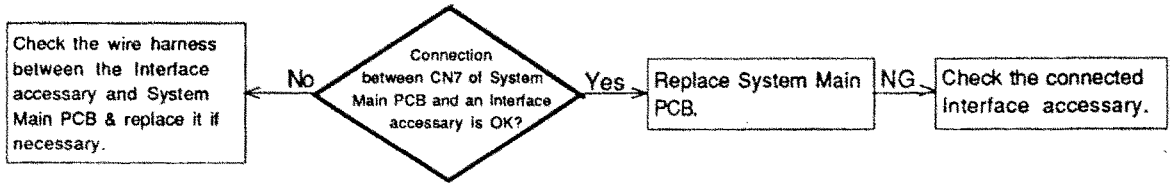
"T7 CALL SERVICE" - **Communication Error** (Panel PCB - Digitizer PCB)

Checking Flowchart


Check the wire harness between Digitizer PCB and Panel Main PCB & replace it if necessary.
No
Connection between CN1 of Digitizer PCB and CN21 of Panel Main PCB is OK?
Yes
Replace Digitizer PCB.
NG
Replace Panel Main PCB.

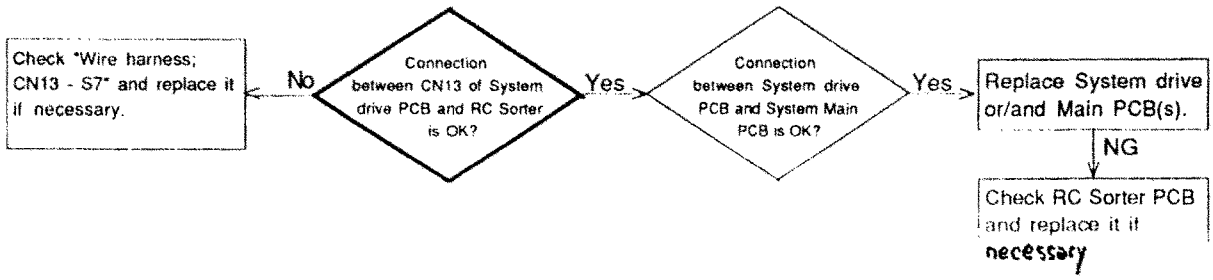
"T8 CALL SERVICE" - **Communication Error** (System PCB - Interface Accs.)

Checking Flowchart


Check the wire harness between the Interface accessary and System Main PCB & replace it if necessary.
No
Connection between CN7 of System Main PCB and an Interface accessary is OK?
Yes
Replace System Main PCB.
NG
Check the connected Interface accessary.

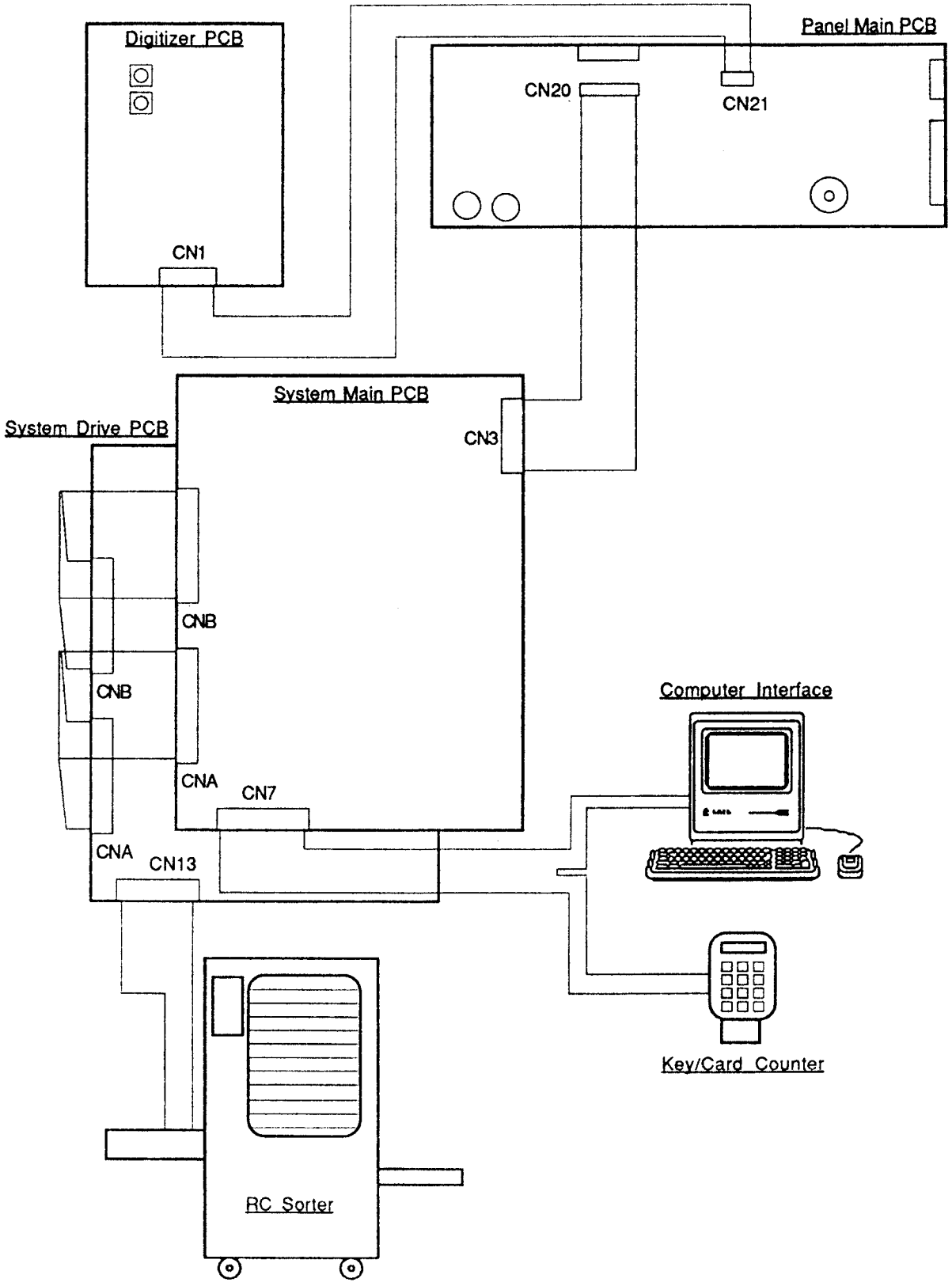
"T9 CALL SERVICE" - **Communication Error** (System PCB - RC Sorter)

Checking Flowchart


Check "Wire harness; CN13 - S7" and replace it if necessary.
No
Connection between CN13 of System drive PCB and RC Sorter is OK?
Yes
Connection between System drive PCB and System Main PCB is OK?
Yes
Replace System drive or/and Main PCB(s).
NG
Check RC Sorter PCB and replace it if necessary

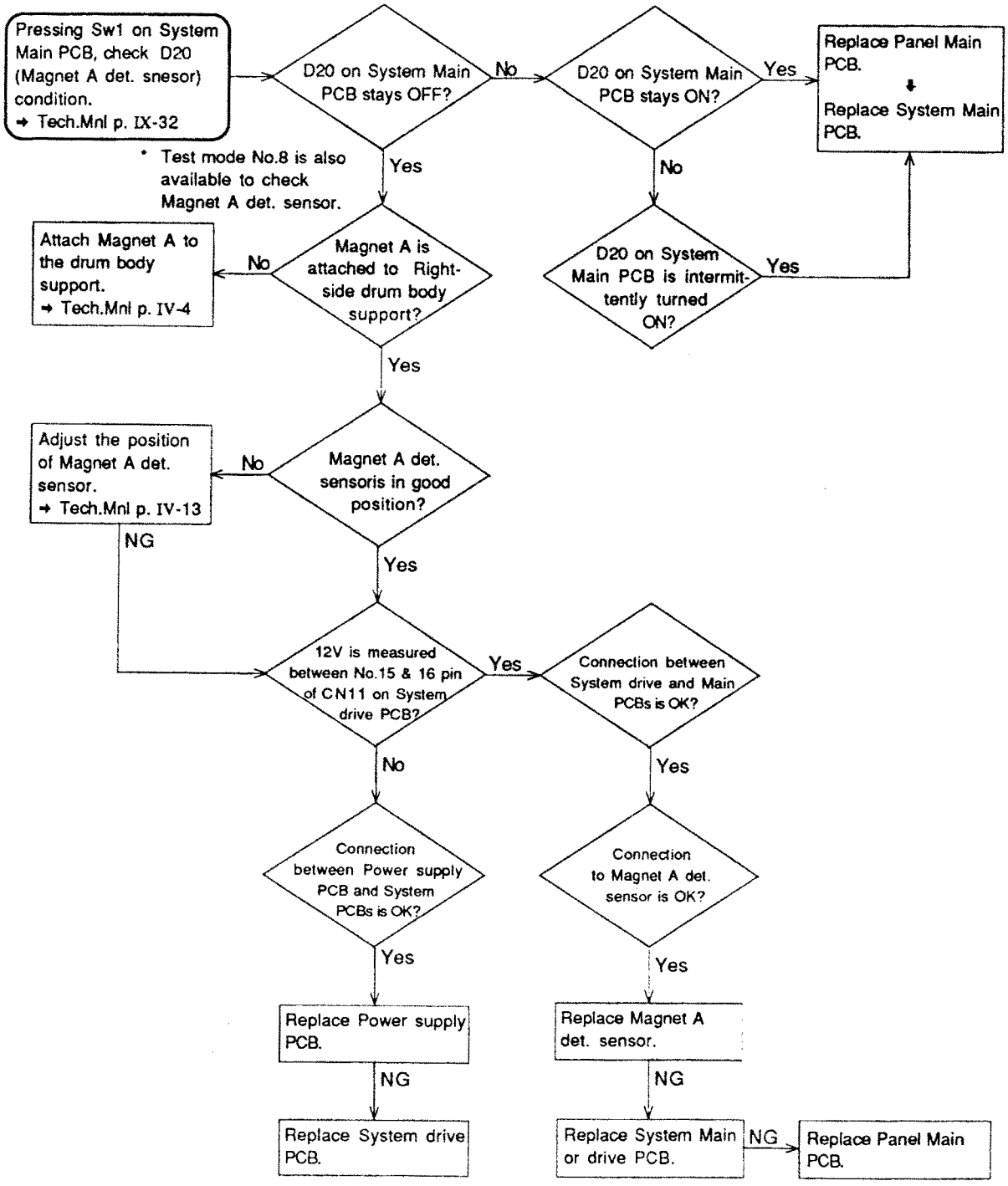
"T6 - T9 CALL SERVICE" - **Communication Errors**

Wire Connection Diagram



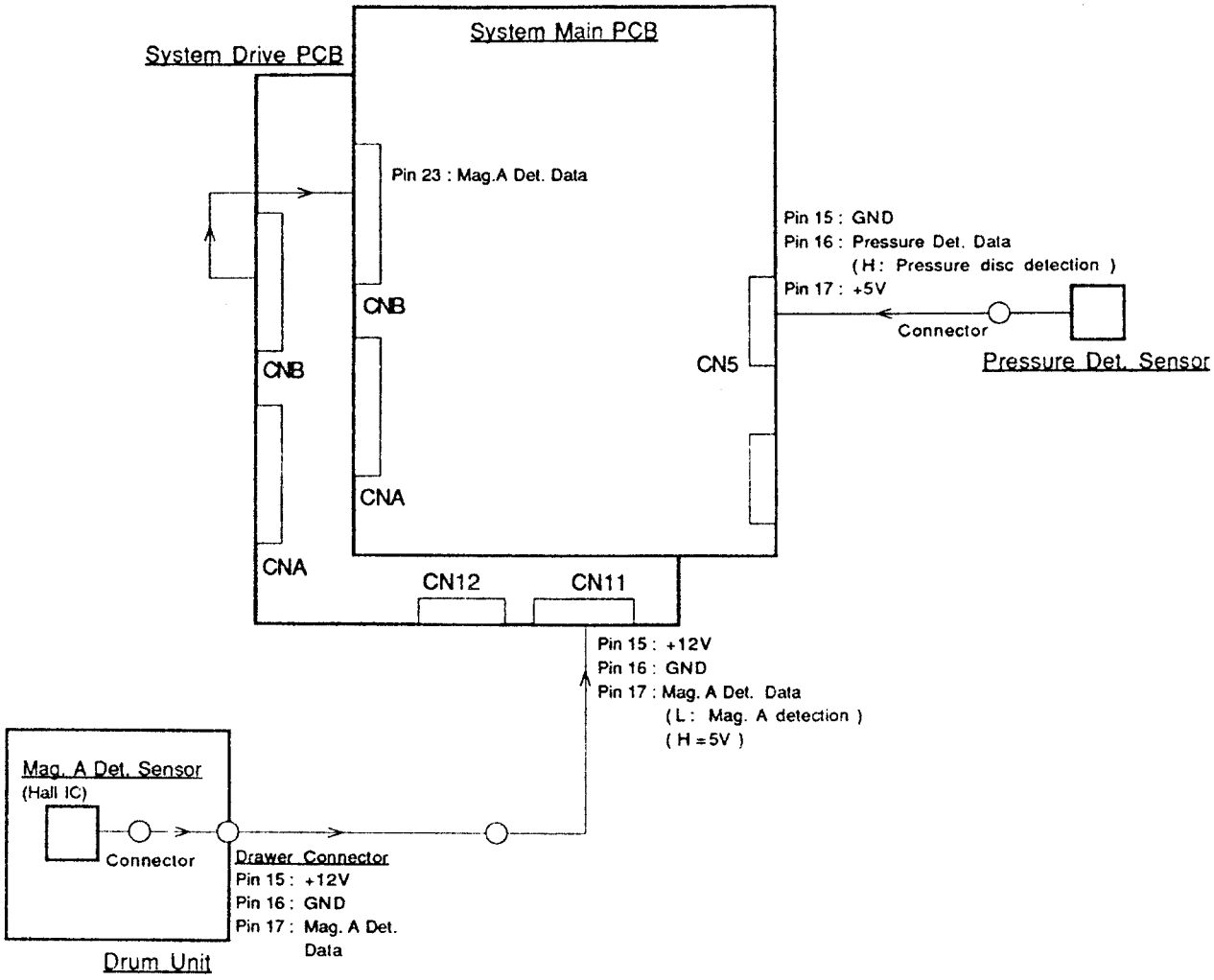
"T10 CALL SERVICE" - **Magnet A Detection Sensor Malfunction**

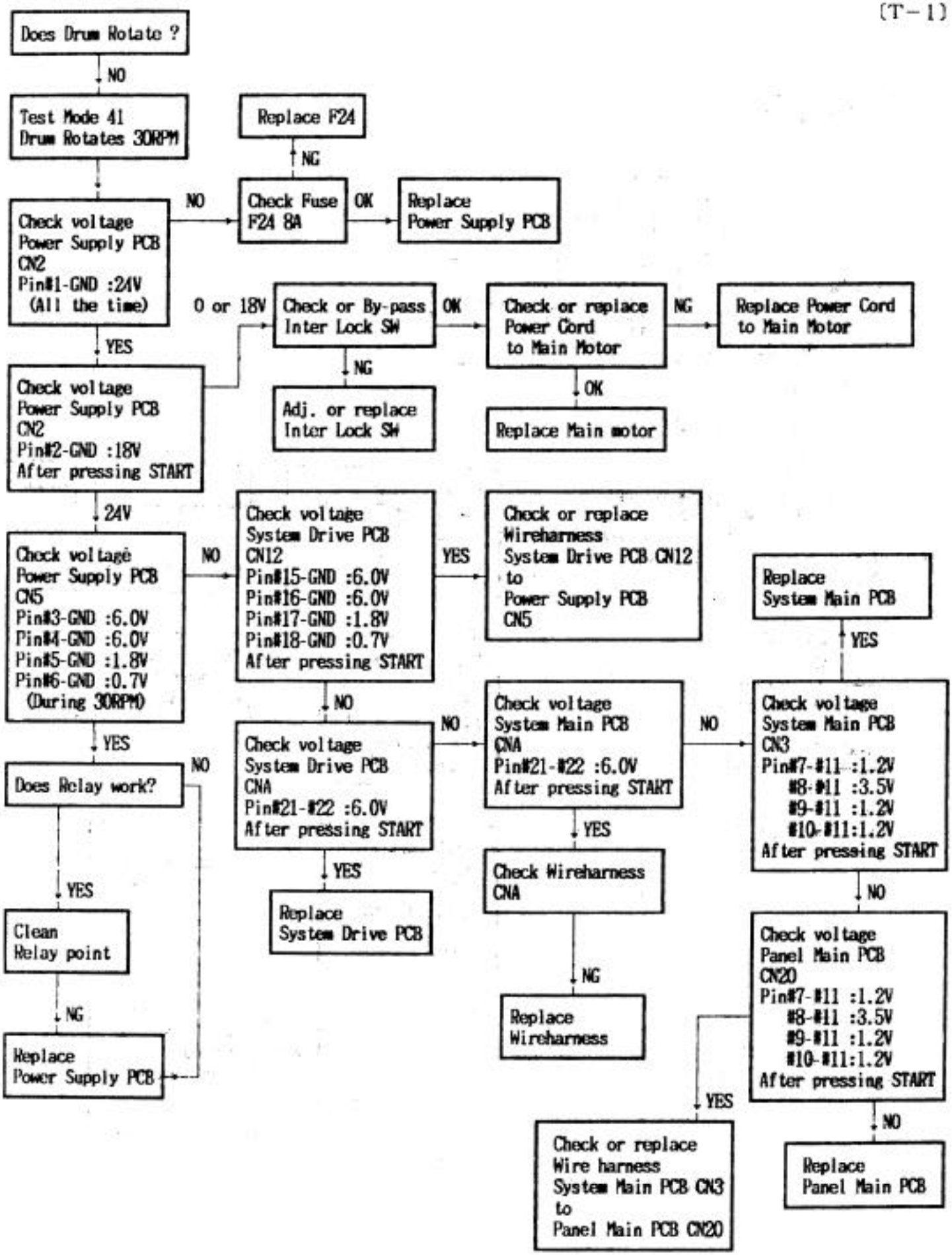
Checking Flowchart


Pressing Sw1 on System Main PCB, check D20 (Magnet A det. snesor) condition.
→ Tech.Mnl p. IX-32
D20 on System Main PCB stays OFF?
No
D20 on System Main PCB stays ON?
Yes
Replace Panel Main PCB.
↓
Replace System Main PCB.
* Test mode No.8 is also available to check Magnet A det. sensor.
Yes
No
Attach Magnet A to the drum body support.
→ Tech.Mnl p. IV-4
No
Magnet A is attached to Right-side drum body support?
D20 on System Main PCB is intermit-tently turned ON?
Yes
Yes
Adjust the position of Magnet A det. sensor.
→ Tech.Mnl p. IV-13
No
Magnet A det. sensoris in good position?
NG
Yes
12V is measured between No.15 & 16 pin of CN11 on System drive PCB?
Yes
Connection between System drive and Main PCBs is OK?
No
Yes
Connection between Power supply PCB and System PCBs is OK?
Connection to Magnet A det. sensor is OK?
Yes
Yes
Replace Power supply PCB.
Replace Magnet A det. sensor.
NG
NG
Replace System drive PCB.
Replace System Main or drive PCB.
NG
Replace Panel Main PCB.

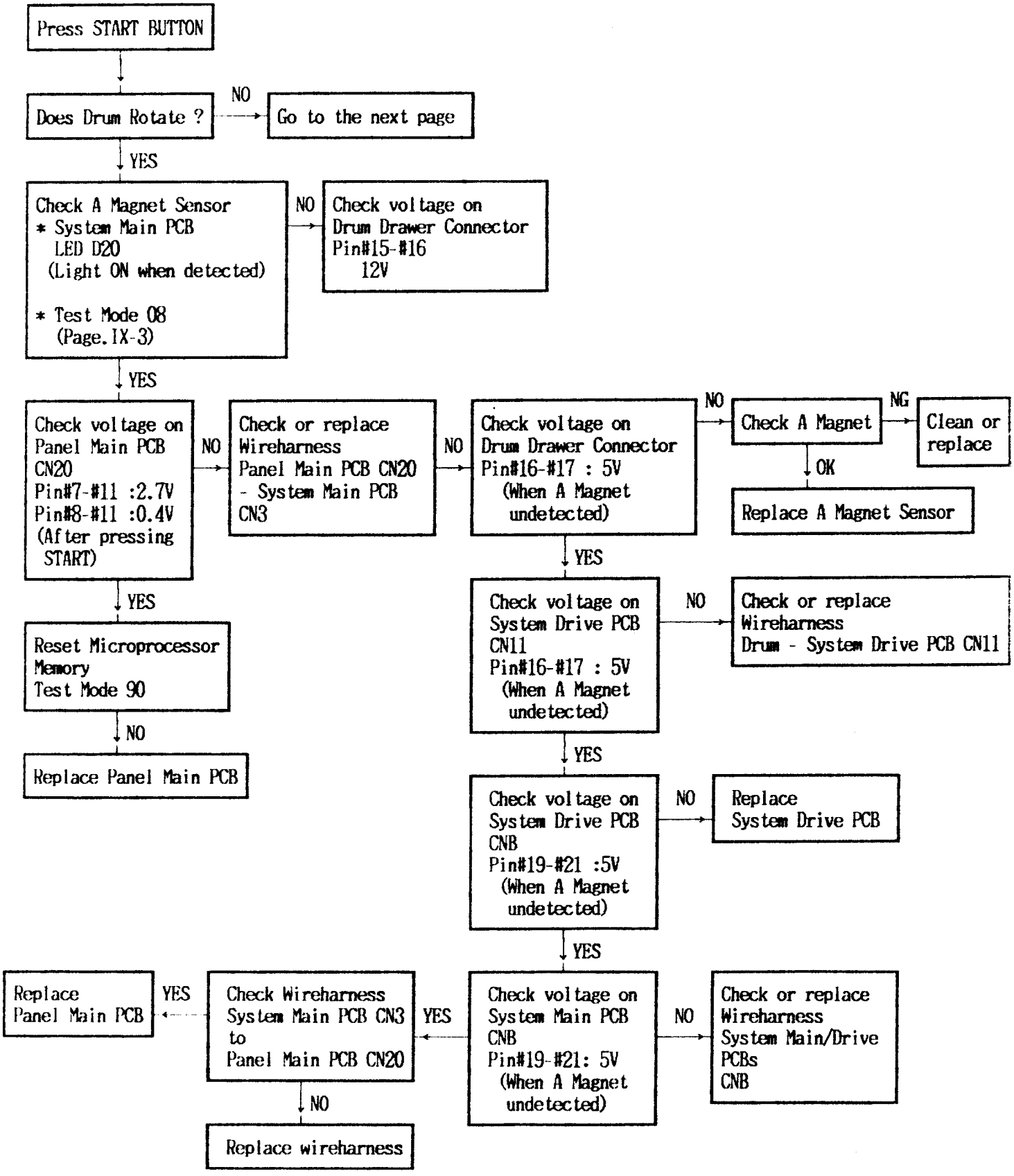
"T10 CALL SERVICE" - **Magnet A Detection Sensor Malfunction**

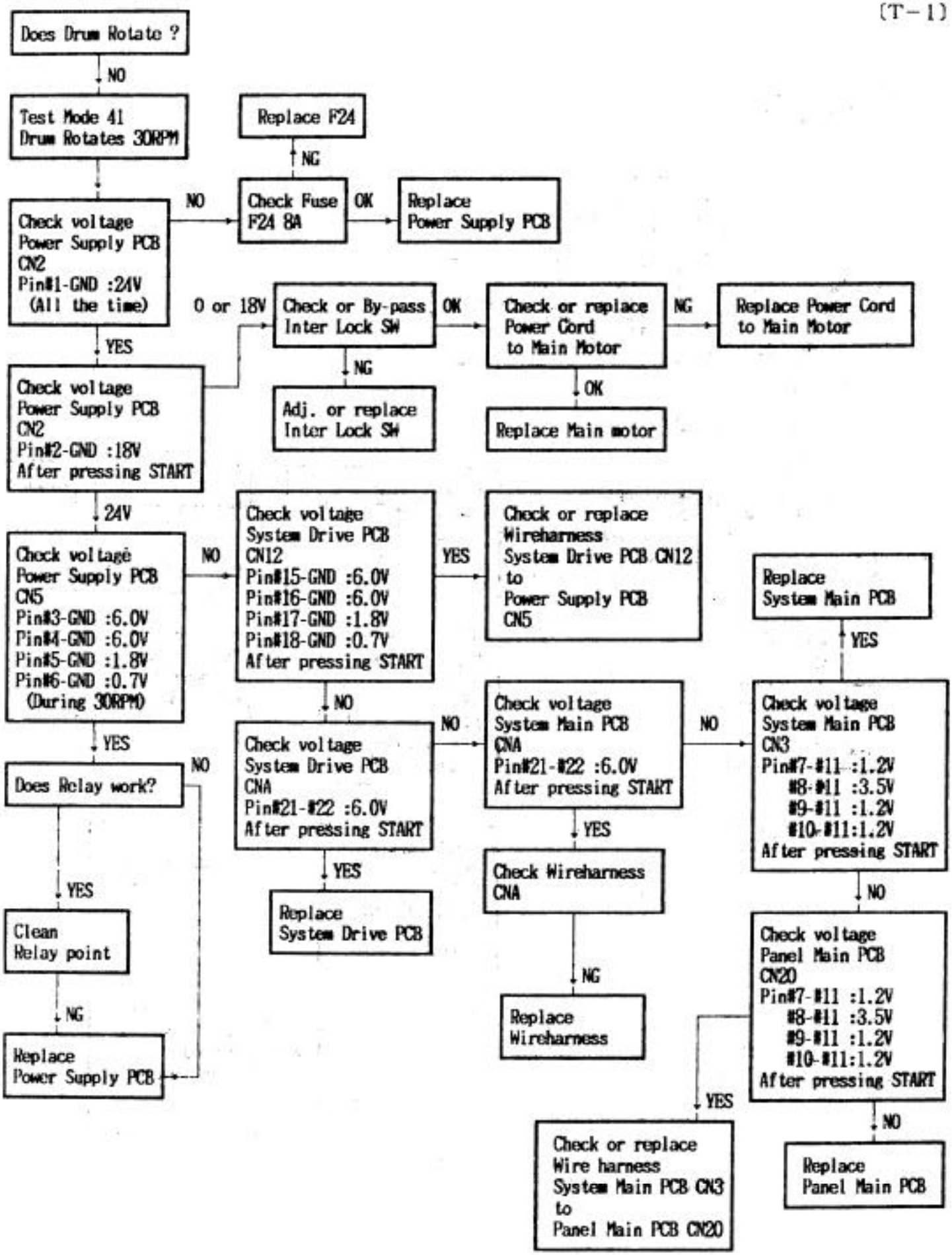
Wire Connection Diagram

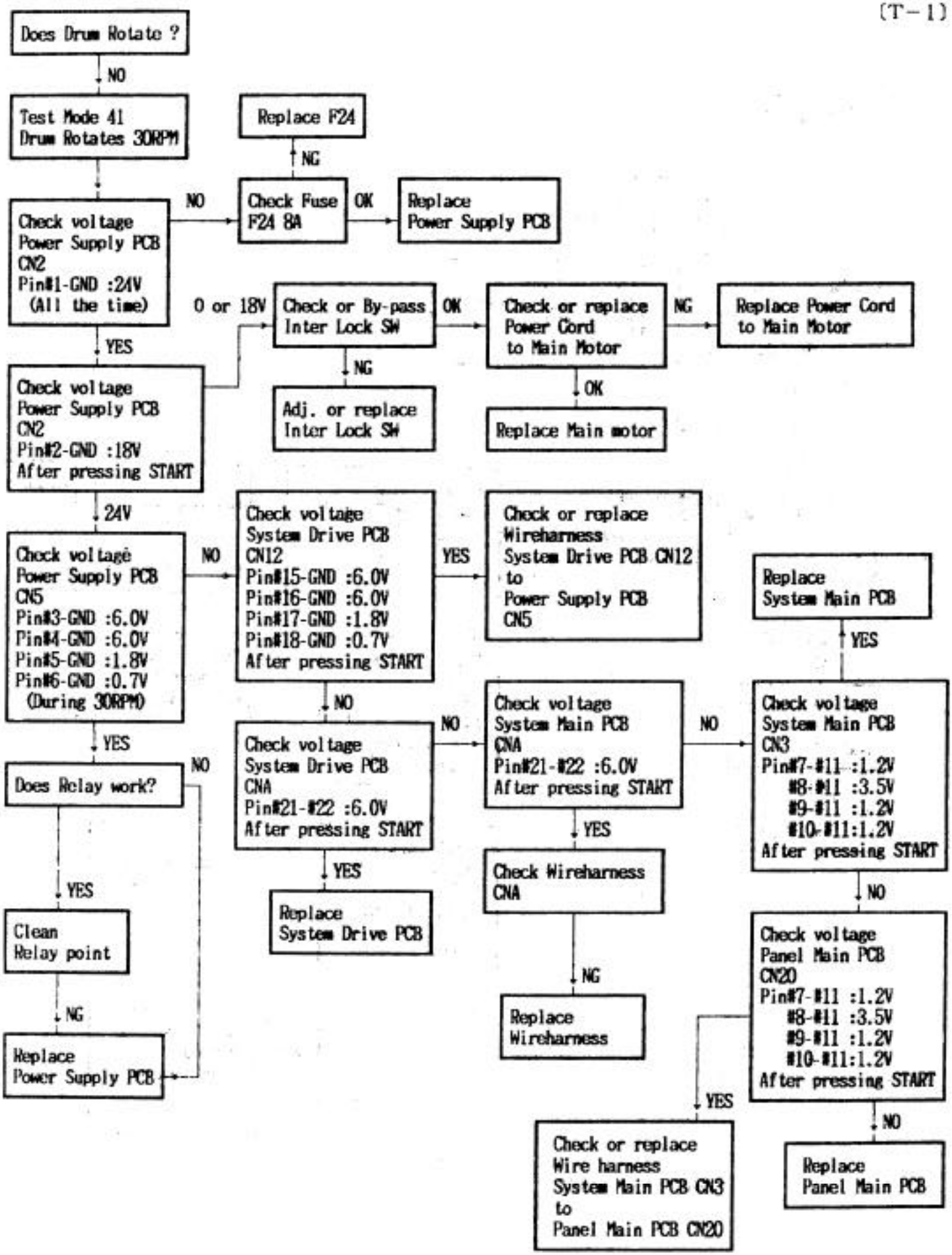


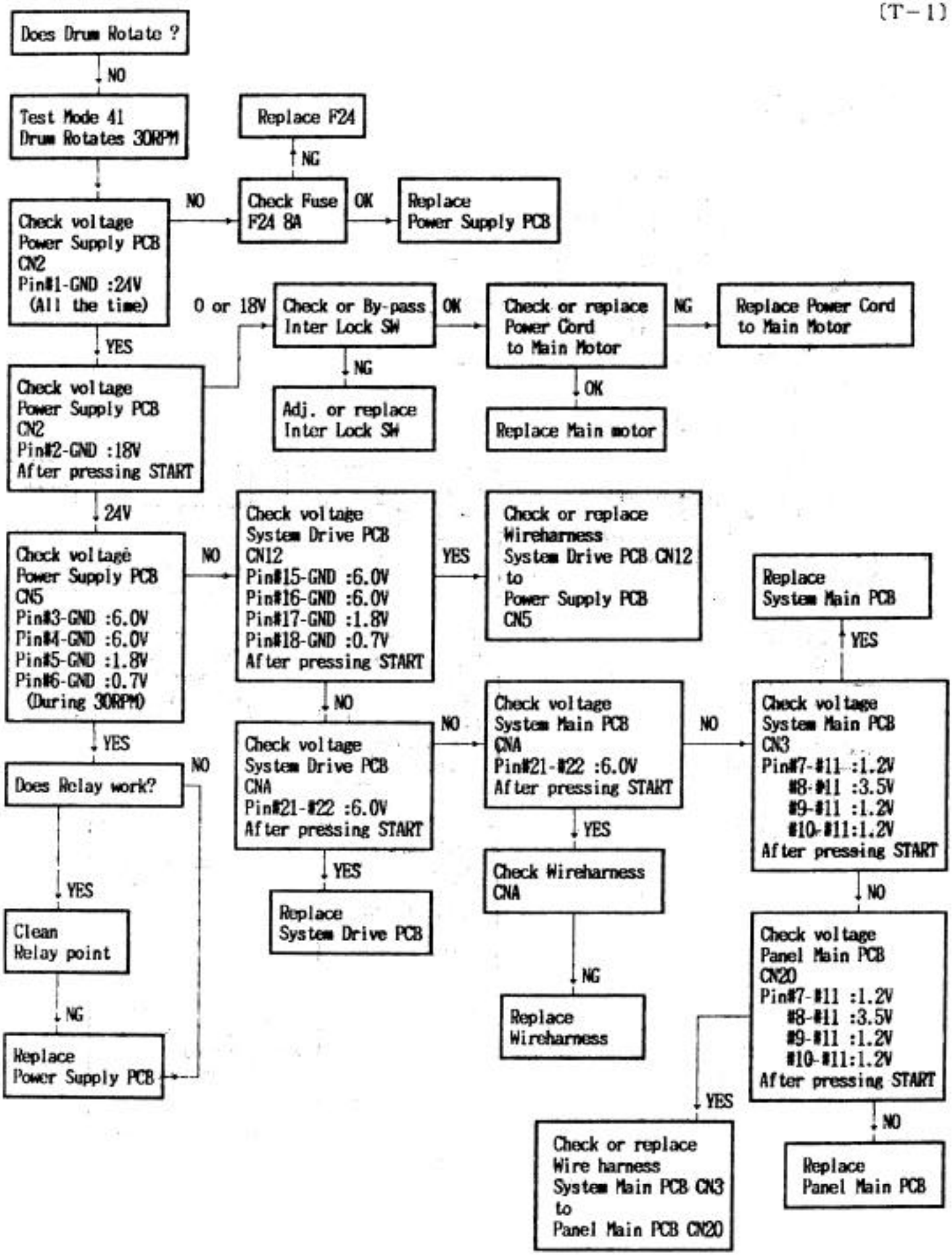

Does Drum Rotate ?
NO
Test Mode 41
Drum Rotates 30RPM
Check voltage
Power Supply PCB
CN2
Pin#1-GND :24V
(All the time)
NO
Check Fuse
F24 8A
OK
Replace
Power Supply PCB
NG
Replace F24
YES
Check voltage
Power Supply PCB
CN2
Pin#2-GND :18V
After pressing START
0 or 18V
Check or By-pass
Inter Lock SW
OK
Check or replace
Power Cord
to Main Motor
NG
Replace Power Cord
to Main Motor
NG
Adj. or replace
Inter Lock SW
OK
Replace Main motor
24V
Check voltage
Power Supply PCB
CN5
Pin#3-GND :6.0V
Pin#4-GND :6.0V
Pin#5-GND :1.8V
Pin#6-GND :0.7V
(During 30RPM)
NO
Check voltage
System Drive PCB
CN12
Pin#15-GND :6.0V
Pin#16-GND :6.0V
Pin#17-GND :1.8V
Pin#18-GND :0.7V
After pressing START
YES
Check or replace
Wireharness
System Drive PCB CN12
to
Power Supply PCB
CN5
YES
Does Relay work?
NO
YES
Clean
Relay point
NG
Replace
Power Supply PCB
NO
Check voltage
System Drive PCB
CNA
Pin#21-#22 :6.0V
After pressing START
YES
Replace
System Drive PCB
NO
Check voltage
System Main PCB
CNA
Pin#21-#22 :6.0V
After pressing START
YES
Check Wireharness
CNA
NG
Replace
Wireharness
NO
Check voltage
System Main PCB
CN3
Pin#7-#11 :1.2V
#8-#11 :3.5V
#9-#11 :1.2V
#10-#11:1.2V
After pressing START
YES
Replace
System Main PCB
NO
Check voltage
Panel Main PCB
CN20
Pin#7-#11 :1.2V
#8-#11 :3.5V
#9-#11 :1.2V
#10-#11:1.2V
After pressing START
YES
Check or replace
Wire harness
System Main PCB CN3
to
Panel Main PCB CN20
NO
Replace
Panel Main PCB

T-1 : MAIN MOTOR LOCK

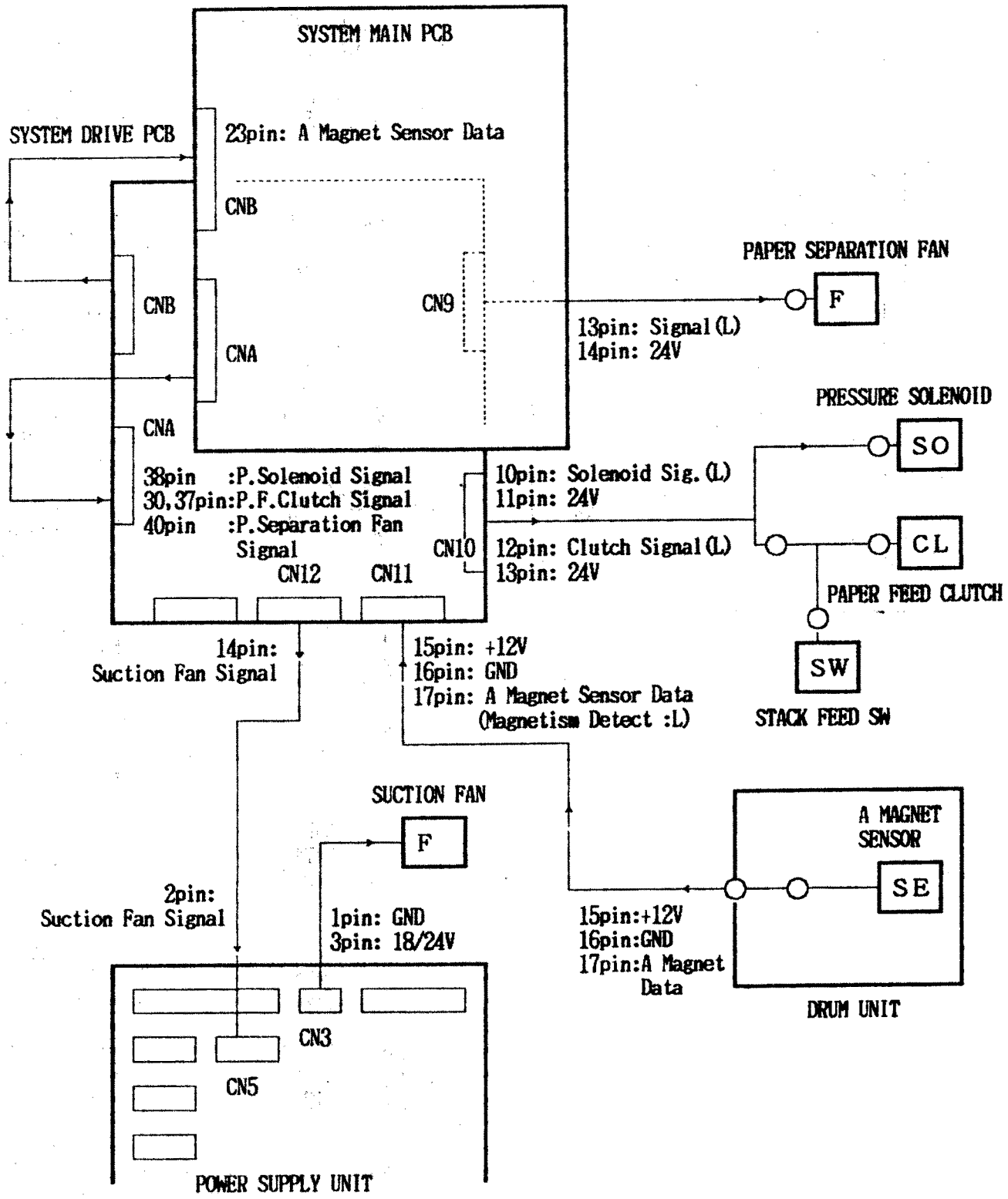



Does Drum Rotate ?
NO
Test Mode 41
Drum Rotates 30RPM
Check voltage
Power Supply PCB
CN2
Pin#1-GND :24V
(All the time)
NO
Check Fuse
F24 8A
OK
Replace
Power Supply PCB
NG
Replace F24
YES
Check voltage
Power Supply PCB
CN2
Pin#2-GND :18V
After pressing START
0 or 18V
Check or By-pass
Inter Lock SW
OK
Check or replace
Power Cord
to Main Motor
NG
Replace Power Cord
to Main Motor
NG
Adj. or replace
Inter Lock SW
OK
Replace Main motor
24V
Check voltage
Power Supply PCB
CN5
Pin#3-GND :6.0V
Pin#4-GND :6.0V
Pin#5-GND :1.8V
Pin#6-GND :0.7V
(During 30RPM)
NO
Check voltage
System Drive PCB
CN12
Pin#15-GND :6.0V
Pin#16-GND :6.0V
Pin#17-GND :1.8V
Pin#18-GND :0.7V
After pressing START
YES
Check or replace
Wireharness
System Drive PCB CN12
to
Power Supply PCB
CN5
YES
Does Relay work?
NO
YES
Clean
Relay point
NG
Replace
Power Supply PCB
NO
Check voltage
System Drive PCB
CNA
Pin#21-#22 :6.0V
After pressing START
YES
Replace
System Drive PCB
NO
Check voltage
System Main PCB
CNA
Pin#21-#22 :6.0V
After pressing START
YES
Check Wireharness
CNA
NG
Replace
Wireharness
NO
Check voltage
System Main PCB
CN3
Pin#7-#11 :1.2V
#8-#11 :3.5V
#9-#11 :1.2V
#10-#11:1.2V
After pressing START
YES
Replace
System Main PCB
NO
Check voltage
Panel Main PCB
CN20
Pin#7-#11 :1.2V
#8-#11 :3.5V
#9-#11 :1.2V
#10-#11:1.2V
After pressing START
YES
Check or replace
Wire harness
System Main PCB CN3
to
Panel Main PCB CN20
NO
Replace
Panel Main PCB

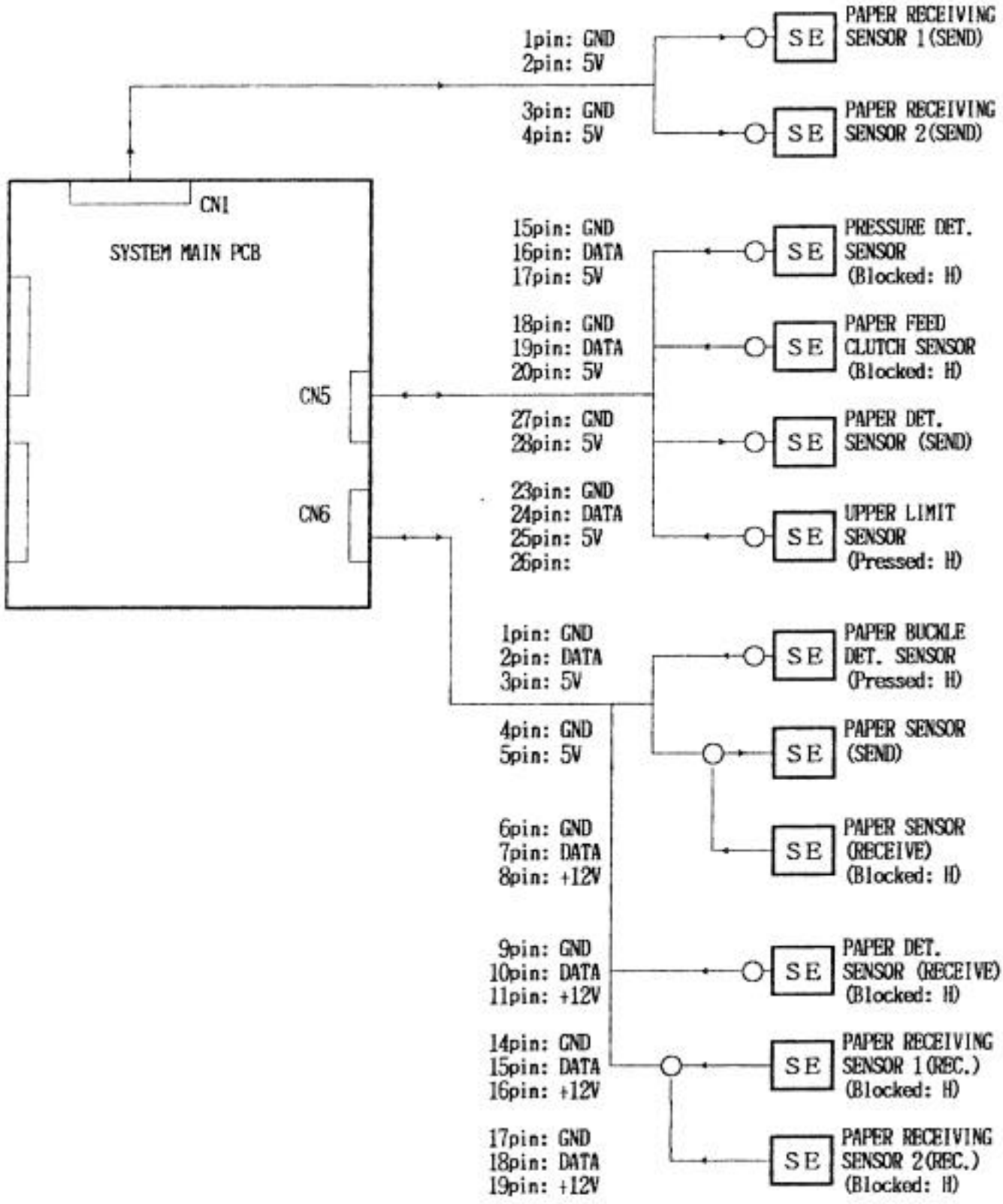

Does Drum Rotate ?
NO
Test Mode 41
Drum Rotates 30RPM
Check voltage
Power Supply PCB
CN2
Pin#1-GND :24V
(All the time)
NO
Check Fuse
F24 8A
OK
Replace
Power Supply PCB
NG
Replace F24
YES
Check voltage
Power Supply PCB
CN2
Pin#2-GND :18V
After pressing START
0 or 18V
Check or By-pass
Inter Lock SW
OK
Check or replace
Power Cord
to Main Motor
NG
Replace Power Cord
to Main Motor
NG
Adj. or replace
Inter Lock SW
OK
Replace Main motor
24V
Check voltage
Power Supply PCB
CN5
Pin#3-GND :6.0V
Pin#4-GND :6.0V
Pin#5-GND :1.8V
Pin#6-GND :0.7V
(During 30RPM)
NO
Check voltage
System Drive PCB
CN12
Pin#15-GND :6.0V
Pin#16-GND :6.0V
Pin#17-GND :1.8V
Pin#18-GND :0.7V
After pressing START
YES
Check or replace
Wireharness
System Drive PCB CN12
to
Power Supply PCB
CN5
YES
Does Relay work?
NO
YES
Clean
Relay point
NG
Replace
Power Supply PCB
NO
Check voltage
System Drive PCB
CNA
Pin#21-#22 :6.0V
After pressing START
YES
Replace
System Drive PCB
NO
Check voltage
System Main PCB
CNA
Pin#21-#22 :6.0V
After pressing START
YES
Check Wireharness
CNA
NG
Replace
Wireharness
NO
Check voltage
System Main PCB
CN3
Pin#7-#11 :1.2V
#8-#11 :3.5V
#9-#11 :1.2V
#10-#11:1.2V
After pressing START
YES
Replace
System Main PCB
NO
Check voltage
Panel Main PCB
CN20
Pin#7-#11 :1.2V
#8-#11 :3.5V
#9-#11 :1.2V
#10-#11:1.2V
After pressing START
YES
Check or replace
Wire harness
System Main PCB CN3
to
Panel Main PCB CN20
NO
Replace
Panel Main PCB


Does Drum Rotate ?
NO
Test Mode 41
Drum Rotates 30RPM
Check voltage
Power Supply PCB
CN2
Pin#1-GND :24V
(All the time)
NO
Check Fuse
F24 8A
OK
Replace
Power Supply PCB
NG
Replace F24
YES
Check voltage
Power Supply PCB
CN2
Pin#2-GND :18V
After pressing START
0 or 18V
Check or By-pass
Inter Lock SW
OK
Check or replace
Power Cord
to Main Motor
NG
Replace Power Cord
to Main Motor
NG
Adj. or replace
Inter Lock SW
OK
Replace Main motor
24V
Check voltage
Power Supply PCB
CN5
Pin#3-GND :6.0V
Pin#4-GND :6.0V
Pin#5-GND :1.8V
Pin#6-GND :0.7V
(During 30RPM)
NO
Check voltage
System Drive PCB
CN12
Pin#15-GND :6.0V
Pin#16-GND :6.0V
Pin#17-GND :1.8V
Pin#18-GND :0.7V
After pressing START
YES
Check or replace
Wireharness
System Drive PCB CN12
to
Power Supply PCB
CN5
YES
Does Relay work?
NO
YES
Clean
Relay point
NG
Replace
Power Supply PCB
NO
Check voltage
System Drive PCB
CNA
Pin#21-#22 :6.0V
After pressing START
YES
Replace
System Drive PCB
NO
Check voltage
System Main PCB
CNA
Pin#21-#22 :6.0V
After pressing START
YES
Check Wireharness
CNA
NG
Replace
Wireharness
NO
Check voltage
System Main PCB
CN3
Pin#7-#11 :1.2V
#8-#11 :3.5V
#9-#11 :1.2V
#10-#11:1.2V
After pressing START
YES
Replace
System Main PCB
NO
Check voltage
Panel Main PCB
CN20
Pin#7-#11 :1.2V
#8-#11 :3.5V
#9-#11 :1.2V
#10-#11:1.2V
After pressing START
YES
Check or replace
Wire harness
System Main PCB CN3
to
Panel Main PCB CN20
NO
Replace
Panel Main PCB

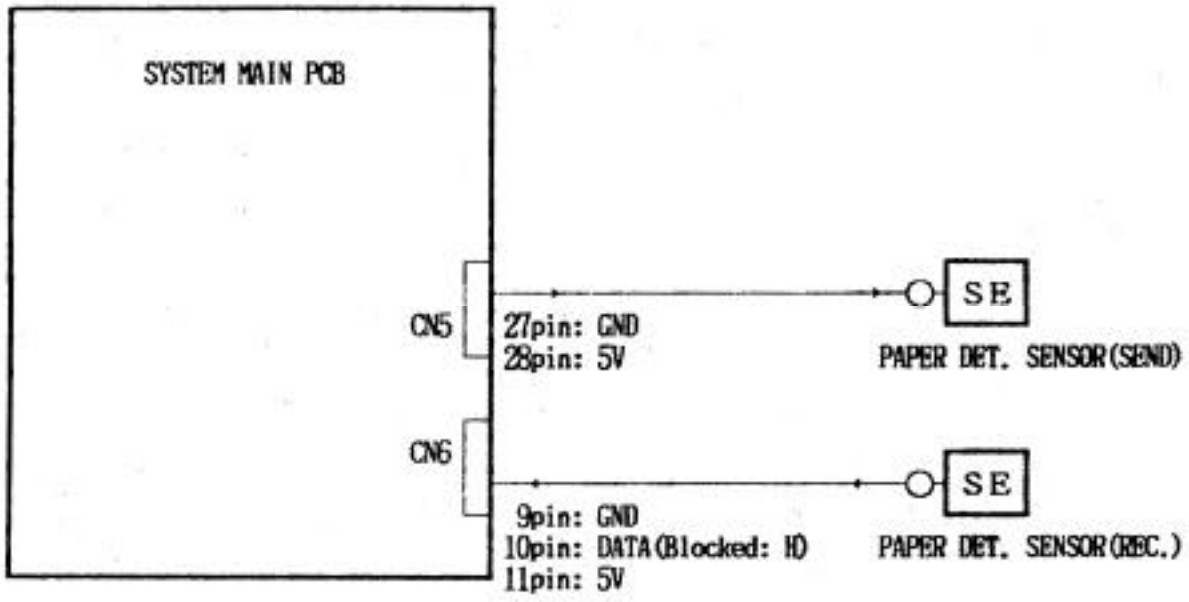
PAPER JAM
CHECK PAPER FEED AREA



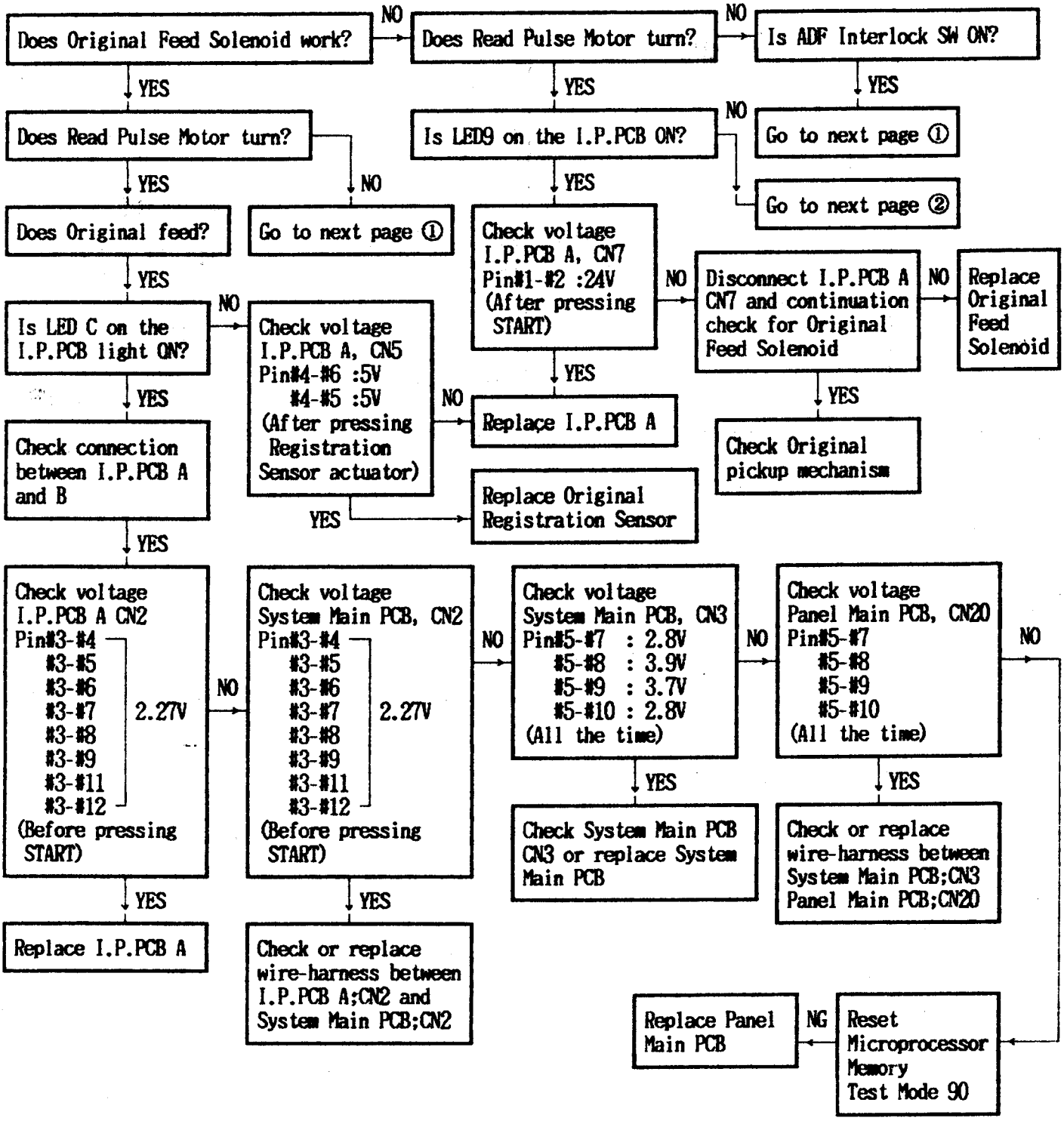
PAPER JAM UNDER DRUM
PULL OUT DRUM

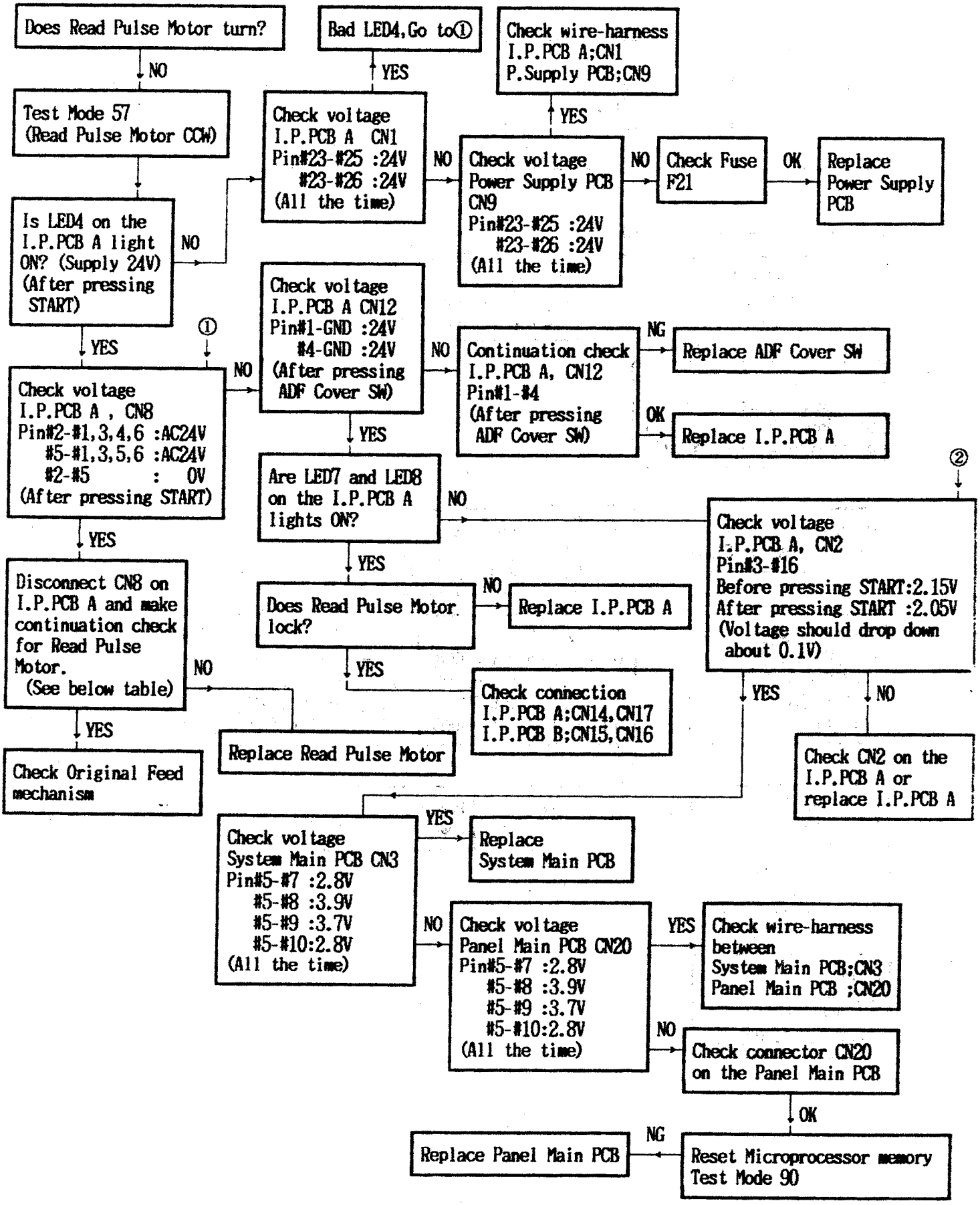


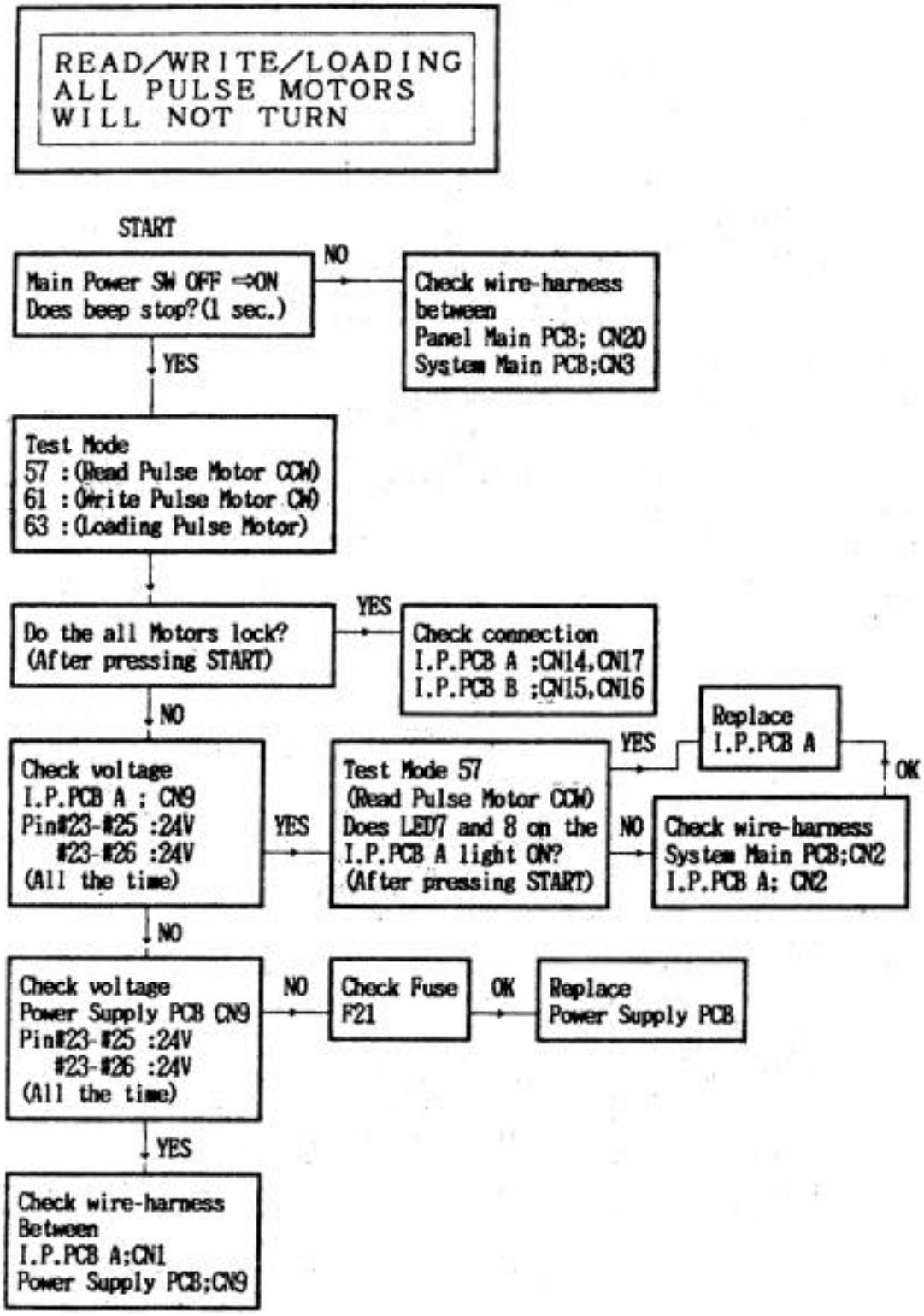
ADD PAPER


SYSTEM MAIN PCB
CN5
27pin: GND
28pin: 5V
SE
PAPER DET. SENSOR(SEND)
CN6
9pin: GND
10pin: DATA(Blocked: H)
11pin: 5V
SE
PAPER DET. SENSOR(REC.)

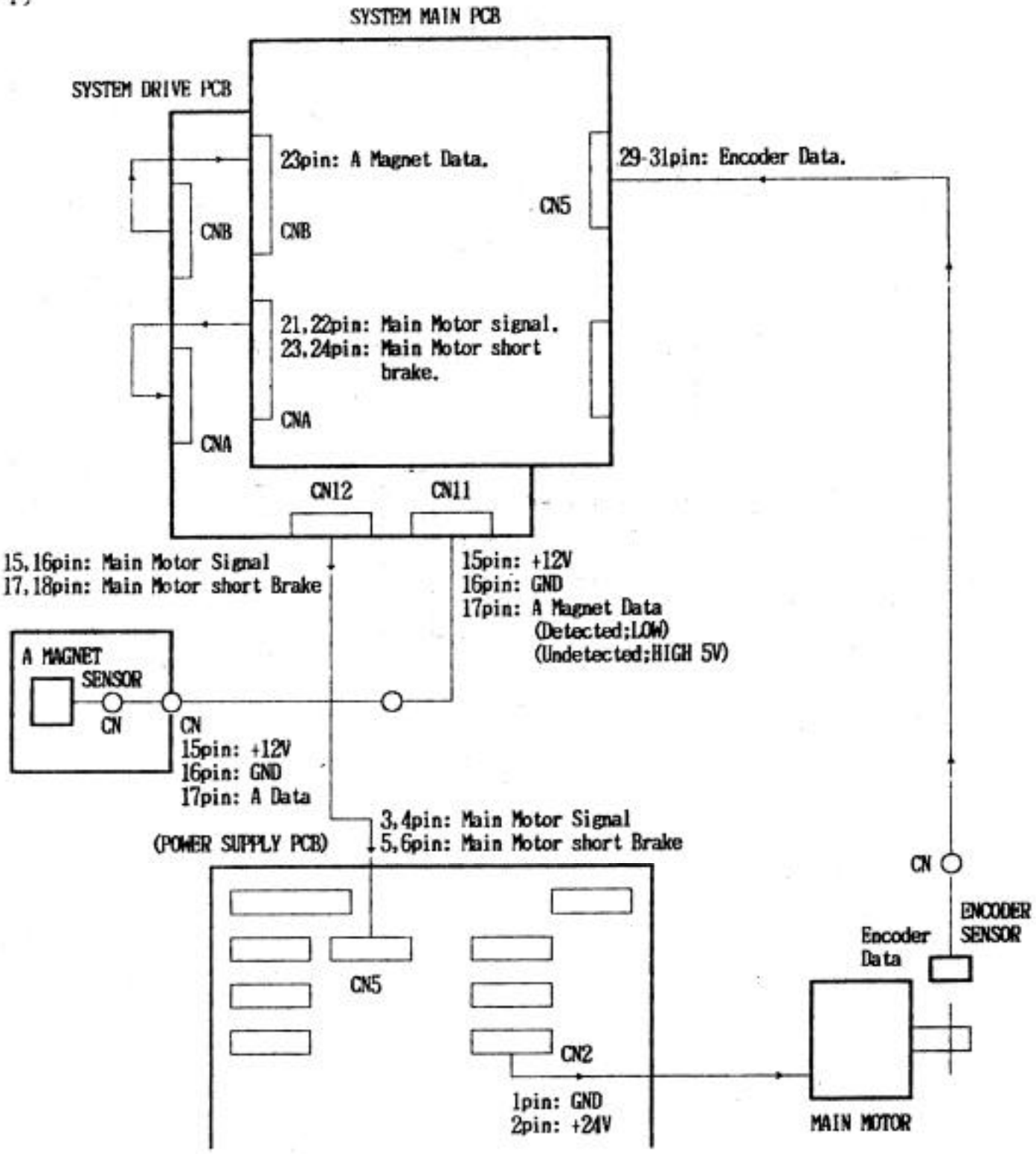
ORIGINAL MIS-FEED RESET ORIGINAL


Does Original Feed Solenoid work?
NO
Does Read Pulse Motor turn?
NO
Is ADF Interlock SW ON?
YES
YES
YES
Does Read Pulse Motor turn?
Is LED9 on the I.P.PCB ON?
NO
Go to next page ①
YES
NO
YES
Go to next page ②
Does Original feed?
Go to next page ①
Check voltage I.P.PCB A, CN7 Pin#1-#2 :24V (After pressing START)
NO
Disconnect I.P.PCB A CN7 and continuation check for Original Feed Solenoid
NO
Replace Original Feed Solenoid
YES
Is LED C on the I.P.PCB light ON?
NO
Check voltage I.P.PCB A, CN5 Pin#4-#6 :5V #4-#5 :5V (After pressing Registration Sensor actuator)
NO
Replace I.P.PCB A
YES
YES
YES
Check connection between I.P.PCB A and B
YES
Replace Original Registration Sensor
Check Original pickup mechanism
YES
Check voltage I.P.PCB A CN2 Pin#3-#4 #3-#5 #3-#6 #3-#7 #3-#8 #3-#9 #3-#11 #3-#12 2.27V (Before pressing START)
NO
Check voltage System Main PCB, CN2 Pin#3-#4 #3-#5 #3-#6 #3-#7 #3-#8 #3-#9 #3-#11 #3-#12 2.27V (Before pressing START)
NO
Check voltage System Main PCB, CN3 Pin#5-#7 : 2.8V #5-#8 : 3.9V #5-#9 : 3.7V #5-#10 : 2.8V (All the time)
NO
Check voltage Panel Main PCB, CN20 Pin#5-#7 #5-#8 #5-#9 #5-#10 (All the time)
NO
YES
YES
YES
Replace I.P.PCB A
Check or replace wire-harness between I.P.PCB A;CN2 and System Main PCB;CN2
Check System Main PCB CN3 or replace System Main PCB
Check or replace wire-harness between System Main PCB;CN3 Panel Main PCB;CN20
Replace Panel Main PCB
NG
Reset Microprocessor Memory Test Mode 90

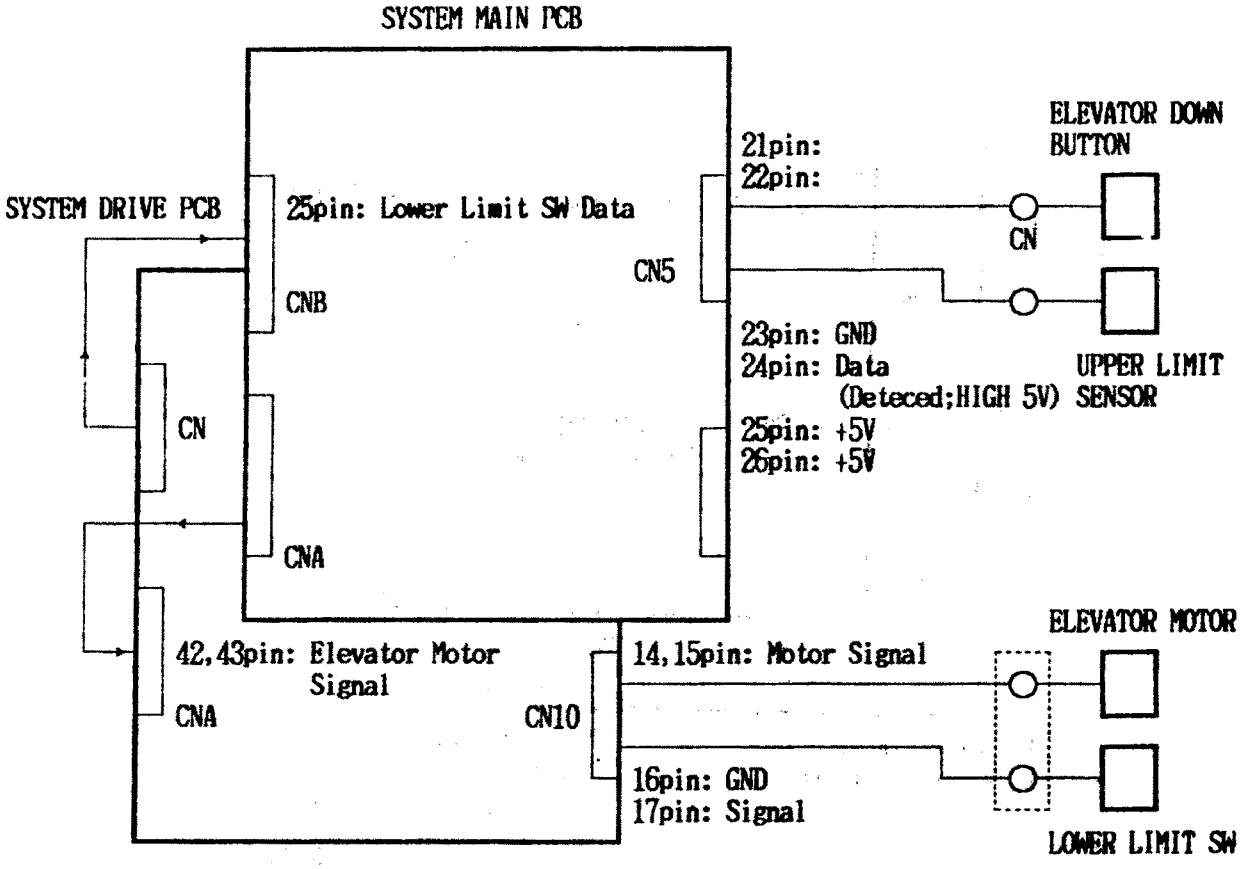

Does Read Pulse Motor turn?
NO
Test Mode 57
(Read Pulse Motor CCW)
Is LED4 on the I.P.PCB A light ON? (Supply 24V) (After pressing START)
NO
YES
Bad LED4,Go to①
YES
Check voltage
I.P.PCB A CN1
Pin#23-#25 :24V
#23-#26 :24V
(All the time)
NO
Check wire-harness
I.P.PCB A;CN1
P.Supply PCB;CN9
YES
Check voltage
Power Supply PCB
CN9
Pin#23-#25 :24V
#23-#26 :24V
(All the time)
NO
Check Fuse
F21
OK
Replace
Power Supply
PCB
①
YES
Check voltage
I.P.PCB A , CN8
Pin#2-#1,3,4,6 :AC24V
#5-#1,3,5,6 :AC24V
#2-#5 : 0V
(After pressing START)
NO
YES
Disconnect CN8 on I.P.PCB A and make continuation check for Read Pulse Motor.
(See below table)
NO
YES
Check Original Feed mechanism
Replace Read Pulse Motor
Check voltage
I.P.PCB A CN12
Pin#1-GND :24V
#4-GND :24V
(After pressing ADF Cover SW)
NO
YES
Continuation check
I.P.PCB A, CN12
Pin#1-#4
(After pressing ADF Cover SW)
NG
Replace ADF Cover SW
OK
Replace I.P.PCB A
Are LED7 and LED8 on the I.P.PCB A lights ON?
NO
YES
Does Read Pulse Motor lock?
NO
Replace I.P.PCB A
YES
Check connection
I.P.PCB A;CN14,CN17
I.P.PCB B;CN15,CN16
②
Check voltage
I.P.PCB A, CN2
Pin#3-#16
Before pressing START:2.15V
After pressing START :2.05V
(Voltage should drop down about 0.1V)
YES
NO
Check CN2 on the I.P.PCB A or replace I.P.PCB A
Check voltage
System Main PCB CN3
Pin#5-#7 :2.8V
#5-#8 :3.9V
#5-#9 :3.7V
#5-#10:2.8V
(All the time)
YES
Replace
System Main PCB
NO
Check voltage
Panel Main PCB CN20
Pin#5-#7 :2.8V
#5-#8 :3.9V
#5-#9 :3.7V
#5-#10:2.8V
(All the time)
YES
Check wire-harness between
System Main PCB;CN3
Panel Main PCB ;CN20
NO
Check connector CN20 on the Panel Main PCB
OK
NG
Reset Microprocessor memory
Test Mode 90
Replace Panel Main PCB

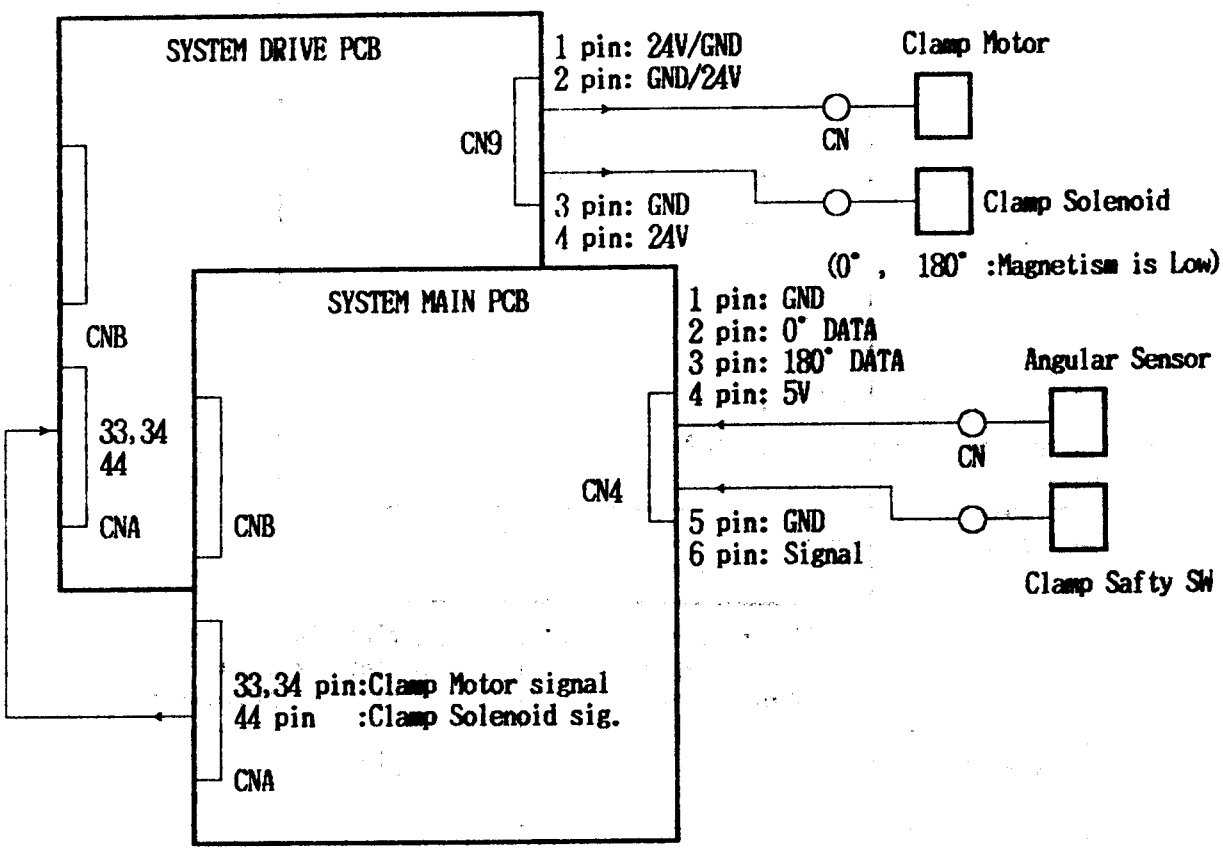

READ/WRITE/LOADING
ALL PULSE MOTORS
WILL NOT TURN
START
Main Power SW OFF ⇒ON
Does beep stop?(1 sec.)
NO
Check wire-harness
between
Panel Main PCB; CN20
System Main PCB;CN3
YES
Test Mode
57 :(Read Pulse Motor CCW)
61 :(Write Pulse Motor CW)
63 :(Loading Pulse Motor)
Do the all Motors lock?
(After pressing START)
YES
Check connection
I.P.PCB A ;CN14,CN17
I.P.PCB B ;CN15,CN16
NO
Check voltage
I.P.PCB A ; CN9
Pin#23-#25 :24V
#23-#26 :24V
(All the time)
YES
Test Mode 57
(Read Pulse Motor CCW)
Does LED7 and 8 on the
I.P.PCB A light ON?
(After pressing START)
YES
Replace
I.P.PCB A
OK
NO
Check wire-harness
System Main PCB;CN2
I.P.PCB A; CN2
NO
Check voltage
Power Supply PCB CN9
Pin#23-#25 :24V
#23-#26 :24V
(All the time)
NO
Check Fuse
F21
OK
Replace
Power Supply PCB
YES
Check wire-harness
Between
I.P.PCB A;CN1
Power Supply PCB;CN9

(T--1)

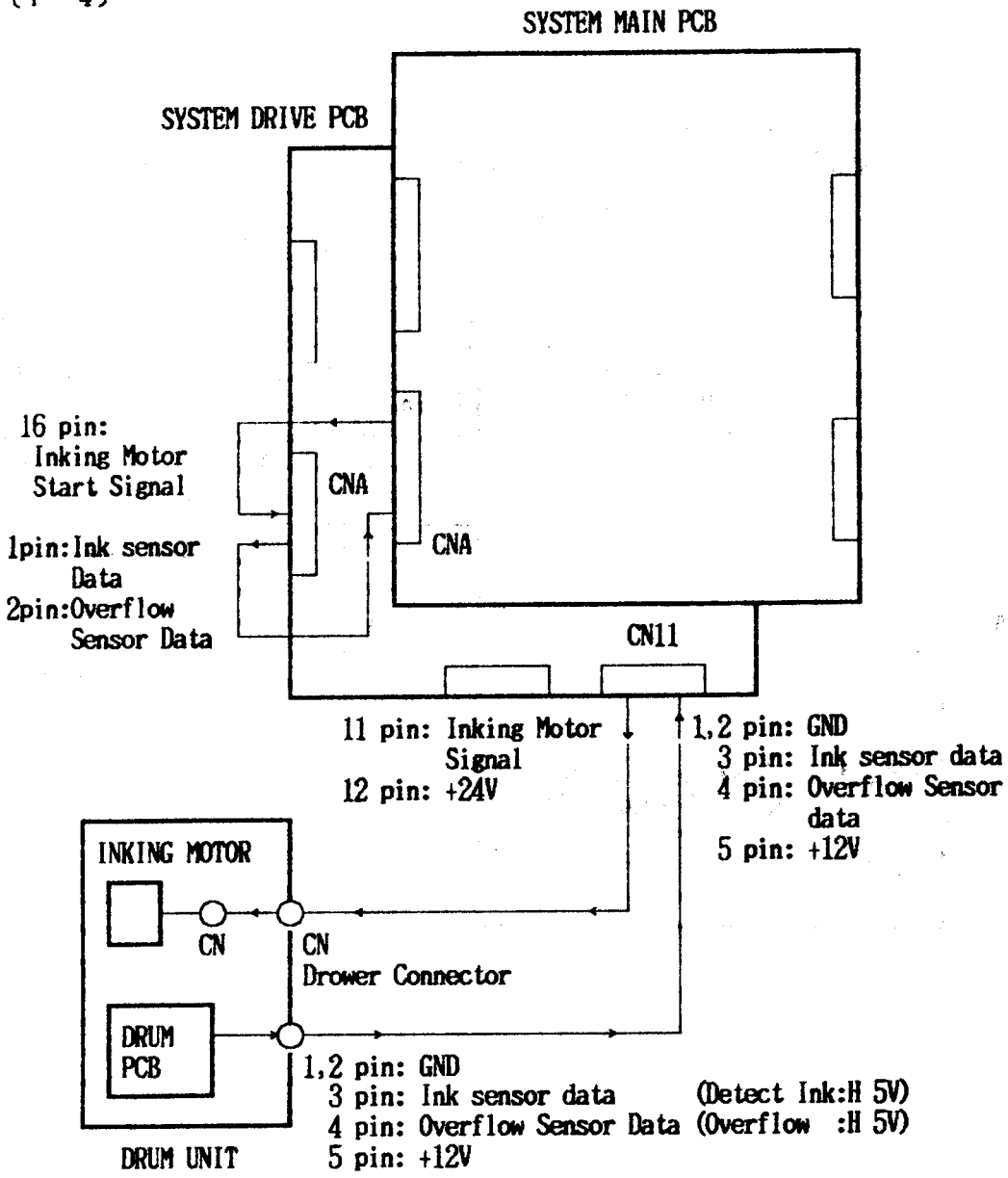

SYSTEM MAIN PCB
SYSTEM DRIVE PCB
23pin: A Magnet Data.
29-31pin: Encoder Data.
CN5
CNB
CNB
21,22pin: Main Motor signal.
23,24pin: Main Motor short brake.
CNA
CNA
CN12
CN11
15,16pin: Main Motor Signal
17,18pin: Main Motor short Brake
15pin: +12V
16pin: GND
17pin: A Magnet Data
(Detected;LOW)
(Undetected;HIGH 5V)
A MAGNET SENSOR
CN
CN
15pin: +12V
16pin: GND
17pin: A Data
3,4pin: Main Motor Signal
5,6pin: Main Motor short Brake
(POWER SUPPLY PCB)
CN
ENCODER SENSOR
Encoder Data
CN5
CN2
1pin: GND
2pin: +24V
MAIN MOTOR

〔T-2〕

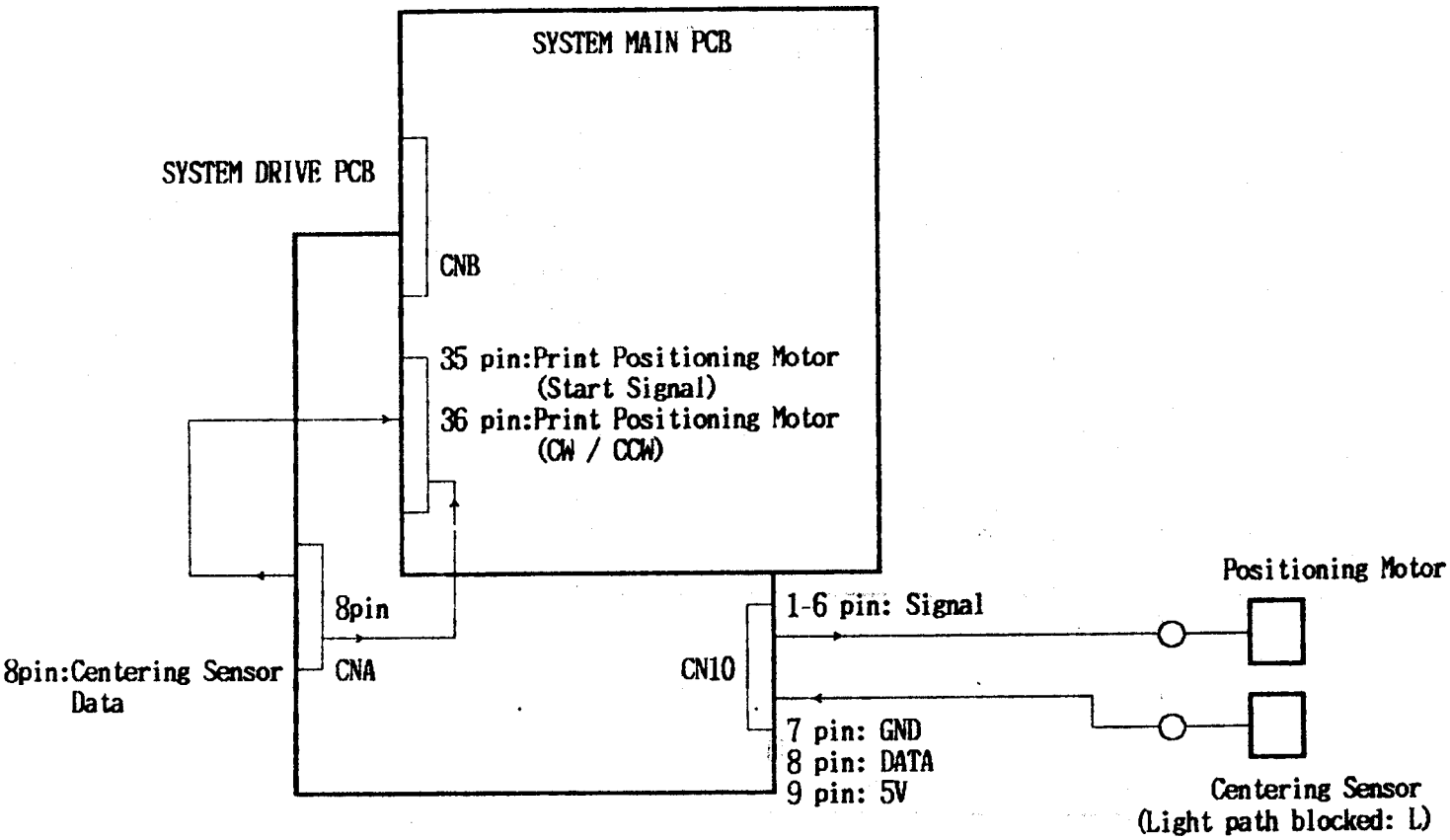

SYSTEM MAIN PCB
SYSTEM DRIVE PCB
25pin: Lower Limit SW Data
CNB
CN
CNA
CN5
21pin:
22pin:
CN
ELEVATOR DOWN BUTTON
23pin: GND
24pin: Data
(Deteced;HIGH 5V)
UPPER LIMIT SENSOR
25pin: +5V
26pin: +5V
42,43pin: Elevator Motor Signal
CNA
CN10
14,15pin: Motor Signal
16pin: GND
17pin: Signal
ELEVATOR MOTOR
LOWER LIMIT SW


SYSTEM DRIVE PCB
1 pin: 24V/GND
2 pin: GND/24V
Clamp Motor
CN9
CN
3 pin: GND
4 pin: 24V
Clamp Solenoid
(0° , 180° :Magnetism is Low)
SYSTEM MAIN PCB
1 pin: GND
2 pin: 0° DATA
3 pin: 180° DATA
4 pin: 5V
Angular Sensor
CNB
33,34
44
CNA
CNB
CN4
CN
5 pin: GND
6 pin: Signal
Clamp Safty SW
33,34 pin:Clamp Motor signal
44 pin :Clamp Solenoid sig.
CNA

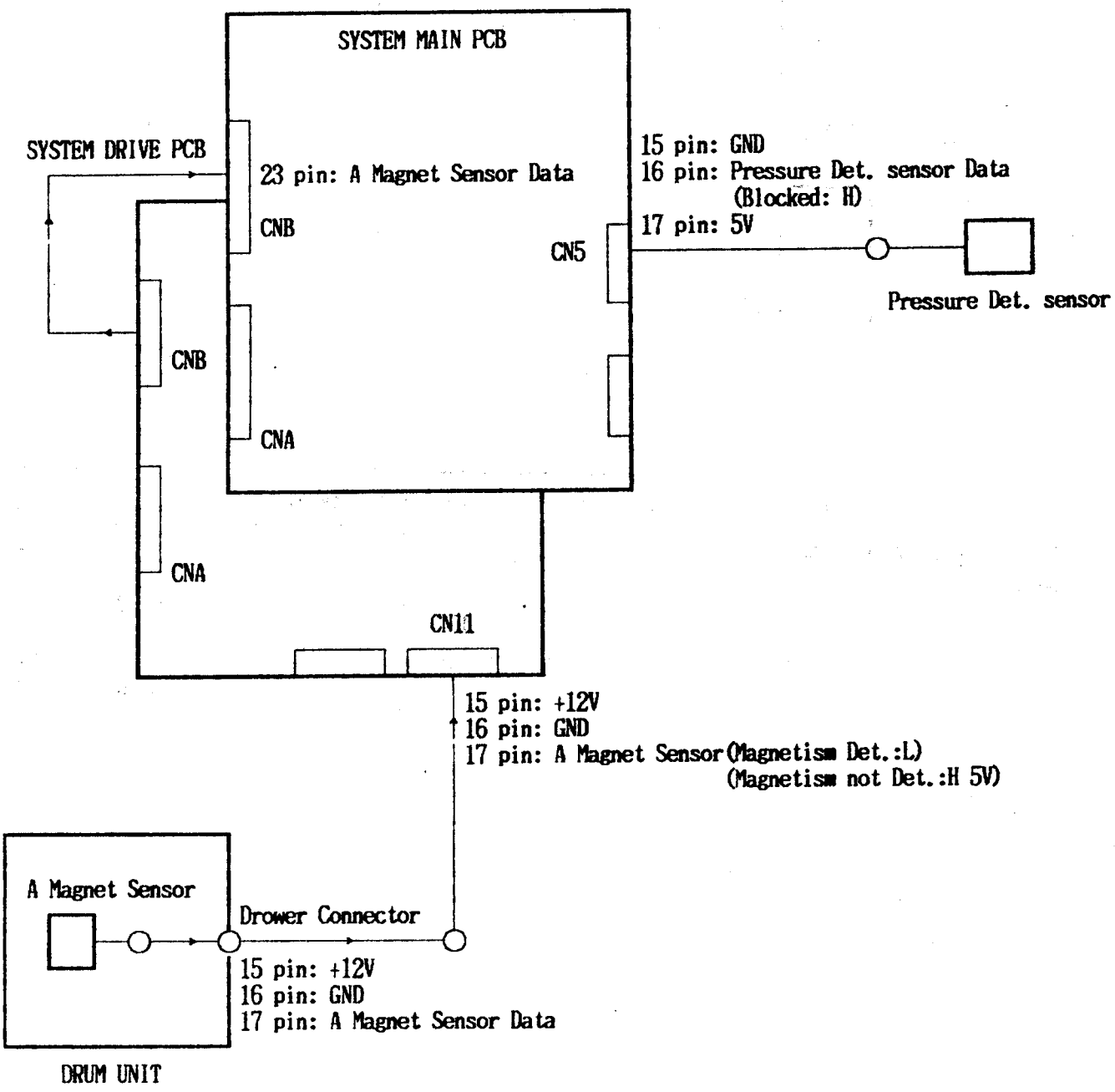
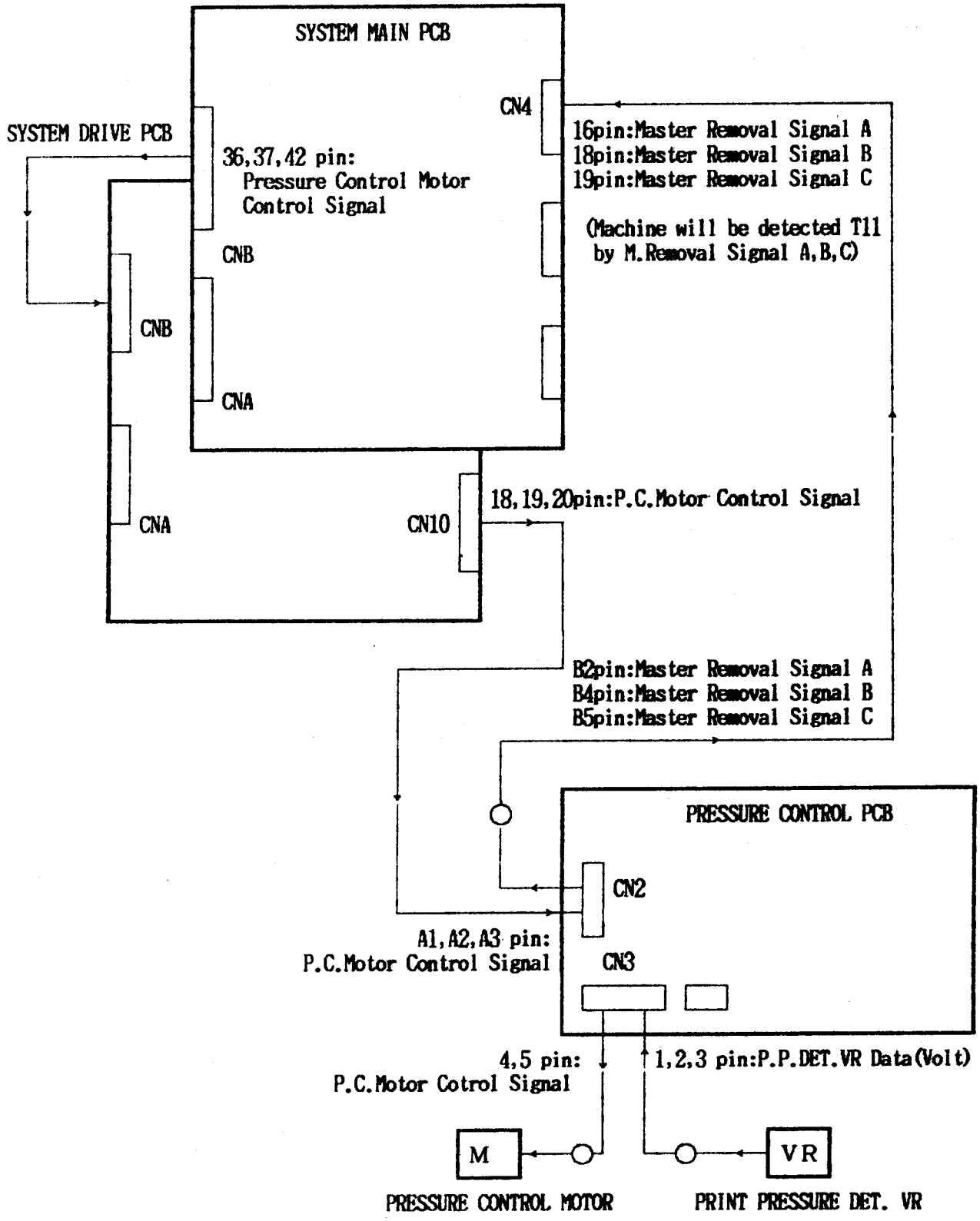
(T-4)


SYSTEM MAIN PCB
SYSTEM DRIVE PCB
16 pin:
Inking Motor
Start Signal
1pin:Ink sensor
Data
2pin:Overflow
Sensor Data
CNA
CNA
CN11
11 pin: Inking Motor
Signal
12 pin: +24V
1,2 pin: GND
3 pin: Ink sensor data
4 pin: Overflow Sensor
data
5 pin: +12V
INKING MOTOR
CN
CN
Drower Connector
DRUM
PCB
1,2 pin: GND
3 pin: Ink sensor data (Detect Ink:H 5V)
4 pin: Overflow Sensor Data (Overflow :H 5V)
5 pin: +12V
DRUM UNIT

(T-5) : POSITIONING MOTOR LOCK



〔T-10〕:MALFUNCTION OF A MAGNET SENSOR



(T-11) : PRESSURE CONTROL MOTOR LOCK